

FH-414/414L

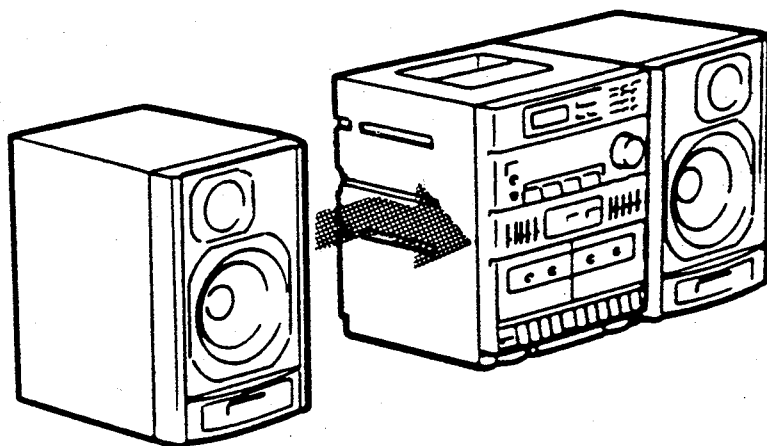
SERVICE MANUAL

AEP Model

FH-414

Saudi Arabia Model

FH-414L



- FH-414 & FH-414L is composed of following models.
As for the service manual it is issued for each component model, than, please refer to it.

COMPONENT MODEL NAME FOR FH-414 & FH-414L

	FH-414		FH-414L
	WG model	AEP model	
TUNER, DECK, AMPLIFIER	HST-414		HST-414L
SPEAKER SYSTEM	SS-H616	SS-H414	

SPECIFICATIONS

Power requirements

AEP model: 220V, 50/60Hz

Saudi Arabia model:

110-120V or 220-240V AC adjustable, 50/60Hz

Power consumption

65watts

Dimensions

Approx. 595 × 270 × 250 mm (w/h/d)

(23 1/2 × 10 3/4 × 10 inches)

incl. projecting parts and controls

Weight

Approx. 9.5 kg (20 lb 15 oz) net

Design and specifications subject to change without notice.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

ACCESSORY & PACKING MATERIAL

Part No.	Description
★ X-4919-684-1	HANDLE ASSY
1-501-349-11	ANTENNA, LOOP
3-750-219-11	(AEP, Saudi Arabia).... MANUAL, INSTRUCTION
3-750-219-41	(AEP).... MANUAL, INSTRUCTION
★ 4-930-360-01	(Saudi Arabia).... INDIVIDUAL CARTON



9-953-674-11

Sony Corporation
Audio Group

**COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY®**

English
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Published by A/V Engineering Service Dept.

HST-414/414L

SERVICE MANUAL

AEP Model

HST-414

Saudi Arabia Model

HST-414L



This set is the tuner, deck and amplifier section in FH-414, 414L.

Model Name Using Similar Mechanism	HST-404
Tape Transport Mechanism Type	DECK A: TCM-YM47CW-70 DECK B: TCM-YM47CW-71

SPECIFICATIONS

Tuner Section

System FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range 87.5 – 108 MHz
Antenna Telescopic antenna
Antenna terminals 75 ohms unbalanced
Intermediate frequency 10.7 MHz

MW/LW tuner section (for HST-414)

	MW	LW
Tuning range	531 – 1602 kHz (except Italian model) 522 – 1611 kHz (for the Italian model)	153 – 281 kHz (except Italian model) 144 – 288 kHz (for the Italian model)
Antenna	AM loop antenna External antenna terminals	

LW/MW/SW tuner section (for HST-414L)

	LW	MW	SW
Tuning range	153 – 281 kHz	531 – 1,602 kHz	5.95 – 17.9 MHz
Antenna	AM loop antenna External antenna terminals		

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Amplifier Section

Continuous RMS power output

20 + 20 watts (6 ohms, at 1 kHz, 5% THD)

Peak music power output

200 watts (6 ohms)

Inputs

	Sensitivity	Impedance
CD (phono jacks)	450 mV	50 kilohms
MIC (minijack)	1 mV	600 ohms
PHONO (phono jacks)	5mV	47 kilohms

Outputs

HEADPHONES (stereo minijack)	Accepts headphones of 8 ohms or more.
SPEAKER	Accepts speakers of 6 to 16 ohms.

Cassette Deck Section

Recording system 4-track 2-channel stereo

Frequency response (DOLBY NR OFF)

60 – 13,000 Hz (± 3 dB), using TYPE I cassette (Sony HF-S)

60 – 14,000 Hz (± 3 dB), using TYPE II cassette

Wow and flutter

0.1% WRMS
 ± 0.3 % (DIN)



COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY®

Overview

Tuner section

- Consult the below chart for the band stations receivable for the model available in your country.

HST-414	LW/MW/FM
HST-414L	LW/MW/SW/FM

- You can store up to 25 stations in the memory.

Amplifier section

- DBFB (Dynamic Bass Feedback) system of the Canadian, European and U.K. models, or SAT (Super Acoustic Turbo) system of the model for other countries reinforces bass sound.
- 5-band stereo graphic equalizer adjusts the sound quality to your preference during playback.

Cassette deck section

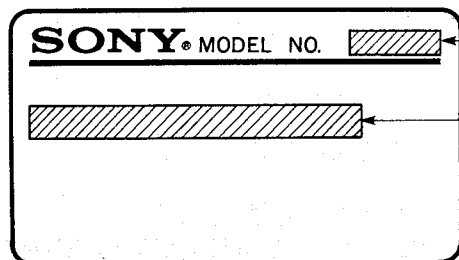
- Double decks allow you to :
 - dub tapes.
 - play back one deck then the other successively.

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MODEL IDENTIFICATION

—Specification Label—



HST-414
HST-414L

HST-414
HST-414L

AEP MODEL AC: 220~50/60Hz
WG MODEL AC: 220~50Hz
IT MODEL AC: 220~50Hz
AC: 110~120/220~240~50/60Hz 65W

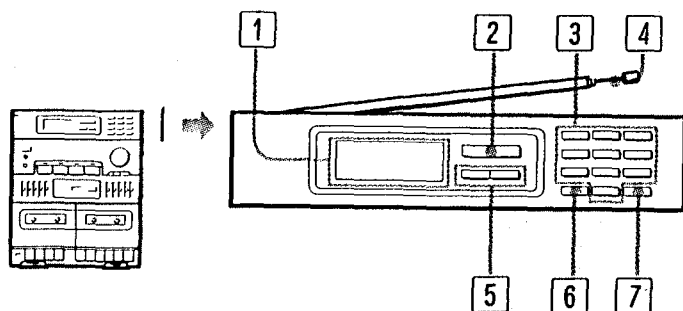
(WG : West Germany model)
(IT : Italian model)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

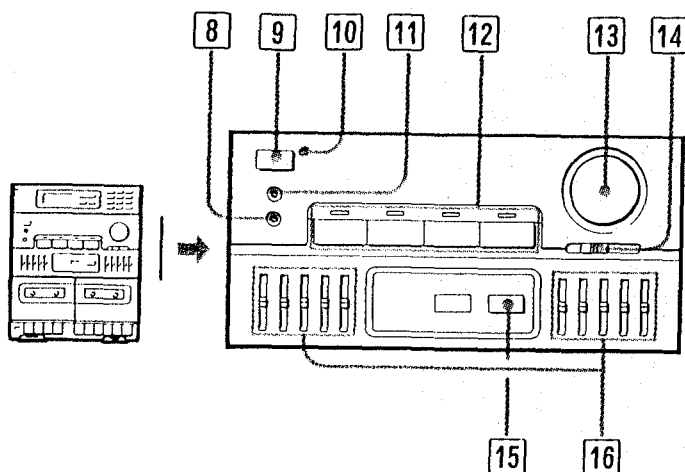
SECTION 1 GENERAL

1-1. PARTS IDENTIFICATION



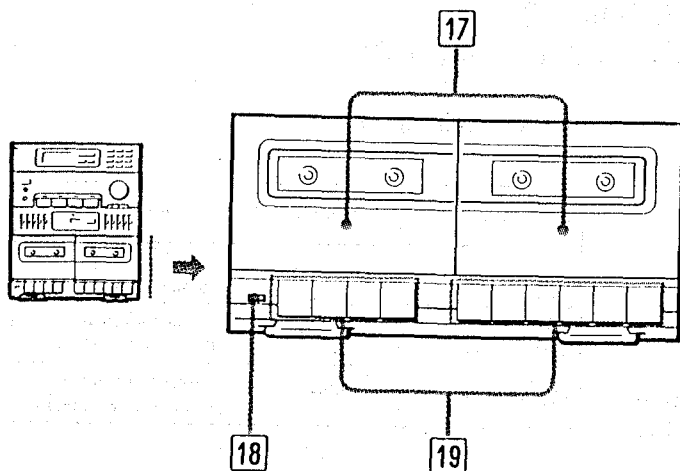
Tuner Section

- 1 Display window
- 2 BAND selector
- 3 PRESET STATION buttons
- 4 Telescopic antenna
- 5 TUNING +/- buttons
- 6 MEMORY button
- 7 ENTER button



Amplifier Section

- 8 HEADPHONES jack (stereo minijack)
- 9 POWER switch
- 10 STANDBY indicator
It is lit as long as the AC power cord is connected to a wall outlet.
- 11 MIX MIC (microphone) jack (minijack)
- 12 Function selectors
- 13 VOLUME control
- 14 BALANCE control
- 15 DBFB (Dynamic Bass Feedback) button
(for the Canadian, European and U.K. model)
- SAT (Super Acoustic Turbo) button
(for the model for other countries)
- 16 5-band stereo graphic equalizer



Cassette Deck Section

- 17 Cassette holder
- 18 DOLBY NR switch
- 19 Tape operation buttons
 - ▶: PLAY (playback) button
 - ◀: REW (rewind) button
 - ▶▶: FF (fast forward) button
 - ▲: STOP/EJECT button
 - : REC (record) button and indicator
 - ||: PAUSE button

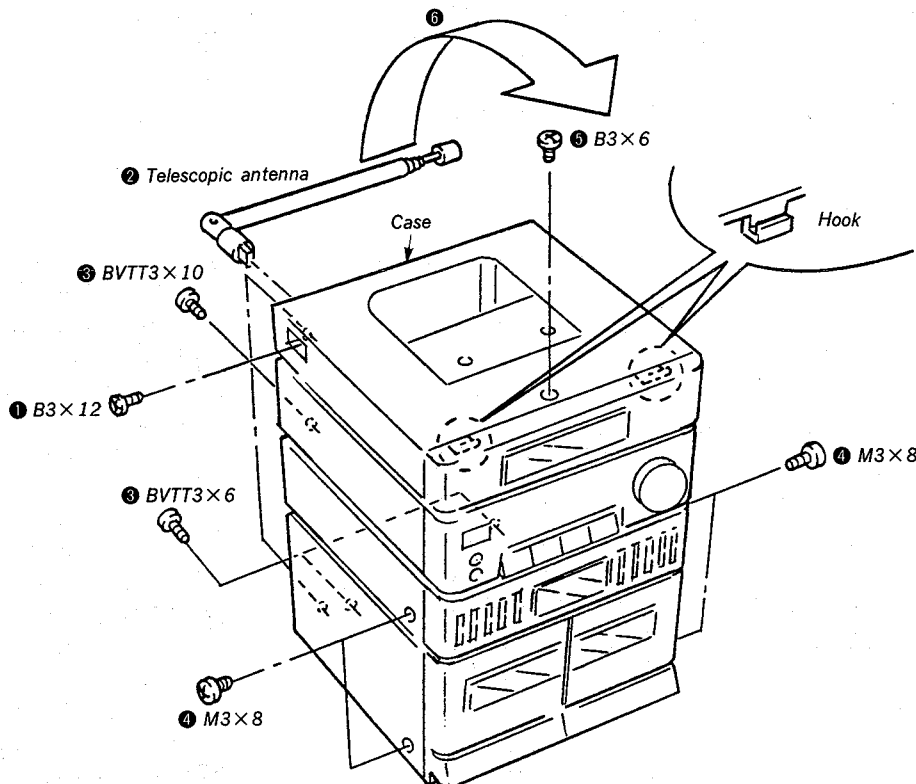
SECTION 2 DISSASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

2-1. Case Removal

1. Remove the ❶ screw +B 3×12, next similar way the ❷ antenna, telescopic.
2. Remove the seven screws. (❸ to ❹)
3. Pull the rear side of case, unlocked the two hooks.

Coution: Be careful not to break off the hooks.



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
 record/playback heads pinch rollers
 erase heads rubber belts
 capstan idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque ment	Meter reading
FWD	CQ-102C	30–70g•cm (0.42–0.97oz•inch)
FWD Back tension	CQ-102C	1.5–5.5g•cm (0.020–0.076oz•inch)
FF, REW	CQ-201B	63g•cm or more (0.87oz•inch or more)

SECTION 4 ELECTRICAL ADJUSTMENTS

- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF

GEQ RV: CENTER

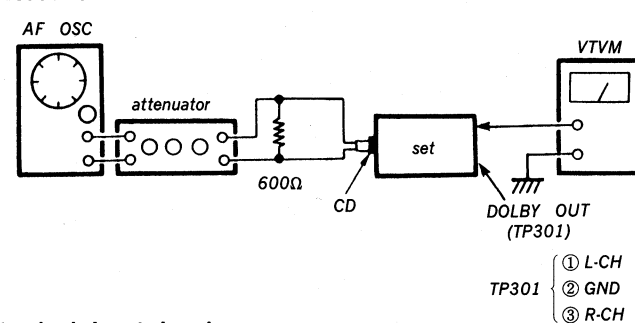
ISS switch: 1

FUNCTION: CD

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Mode: record



Standard Input Level

	AUX/CD
source impedance	600Ω
input level	0.46V (-4.6dB)

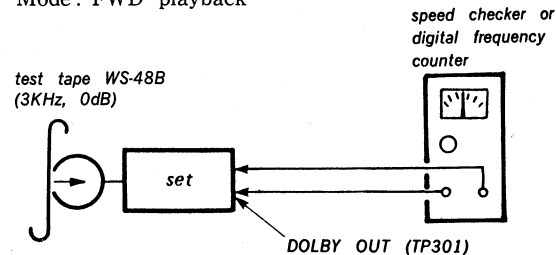
Standard Output Level

	DOLBY OUT
load impedance	—
output level	0.4V (-5.7dB)

Tape Speed Check

Procedure:

Mode: FWD playback



Specification:

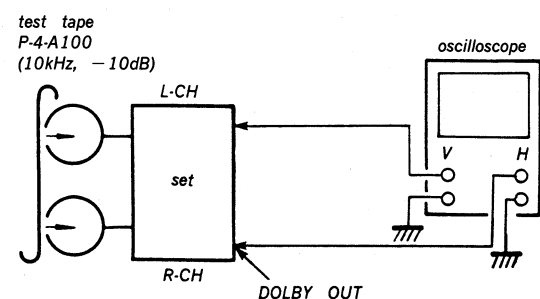
Digital frequency counter
2,920Hz-3,070Hz

Record/Playback Head Azimuth Adjustment

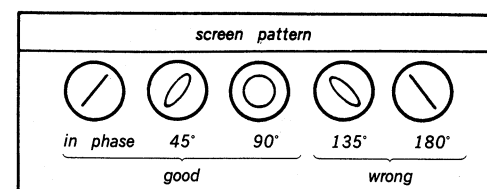
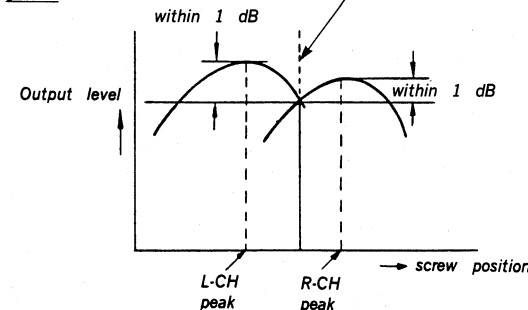
Note: Perform this adjustments for both decks.

Procedure:

- Mode: FWD playback

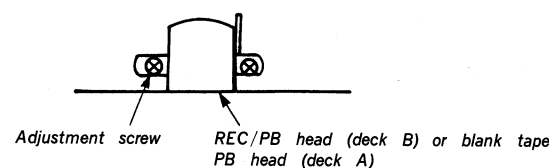


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



- After the adjustments, apply suitable locking compound to the parts adjusted.

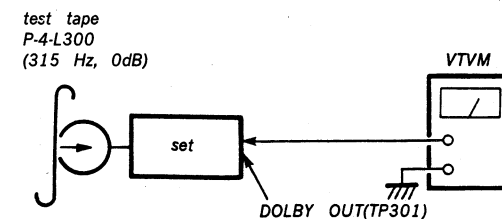
Adjustment Location:



Playback Level Adjustment

Procedure:

Mode: FWD playback



Adjust,

DECK-A side RV321 (L-CH), RV421 (R-CH)

DECK-B side RV331 (L-CH), RV431 (R-CH)

so that the specifications are satisfied.

LINE OUT level: 0.38 to 0.42V

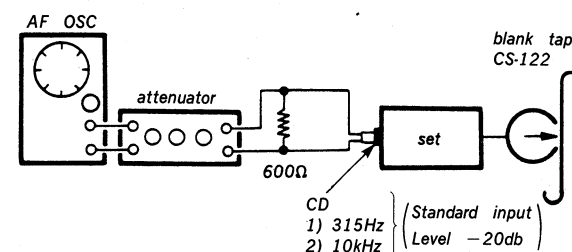
(-6.2 to -5.2dB)

level difference between the channels: within 1.0dB

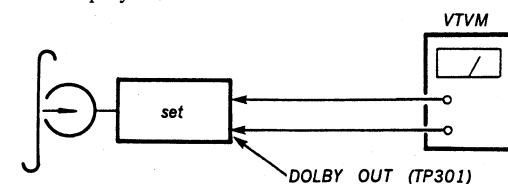
Record Level Adjustment

Procedure:

- Mode: record



- Mode: playback



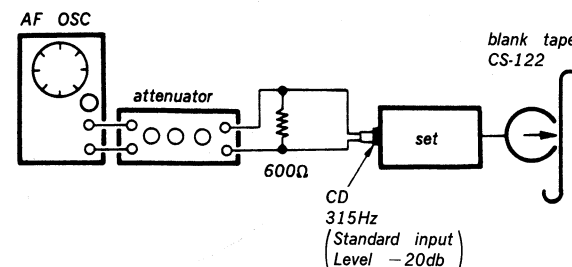
Play back the recorded in step 1. If the specification is not satisfied, adjust RV341 (L-CH), RV441 (R-CH) and repeat steps 1 and 2.

DOLBY OUT level: 0.45 to 0.36V (-4.7 to -6.7dB)

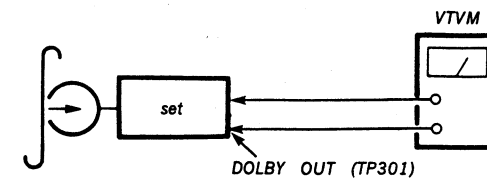
Record BIAS Current Adjustment

Procedure:

- Mode: record



- Mode: playback



Play back the recorded in step 1. If the specification is not satisfied, adjust RV361 (L-CH), RV461, (R-CH) and repeat steps 1 and 2.

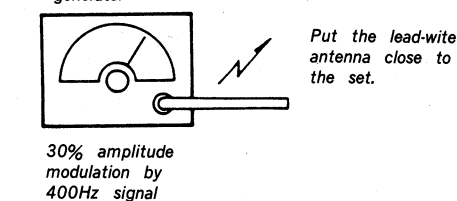
The DOLBY OUT level of 10 kHz signal relative to that of 315 Hz: -1 to 1dB

AM SECTION

Setting:

BAND selector switch: SW or MW (AM), LW

AM RF signal generator



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

HST-414L

SW3 OSC Voltage Adjustment

Procedure:

- Connect the VOM to FL001@pin (VT).
- Set the BAND selector switch to SW.
- Push the TUNING (+, -) button for 5.95MHz Adjust L003 for 0.9 to 1.1V reading on the VOM.
- Push the button for 17.9MHz. Adjust CT003 for 8.7 to 9.3V reading on the VOM.

HST-414L

SW3 TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
17MHz	7MHz
CT004	L004

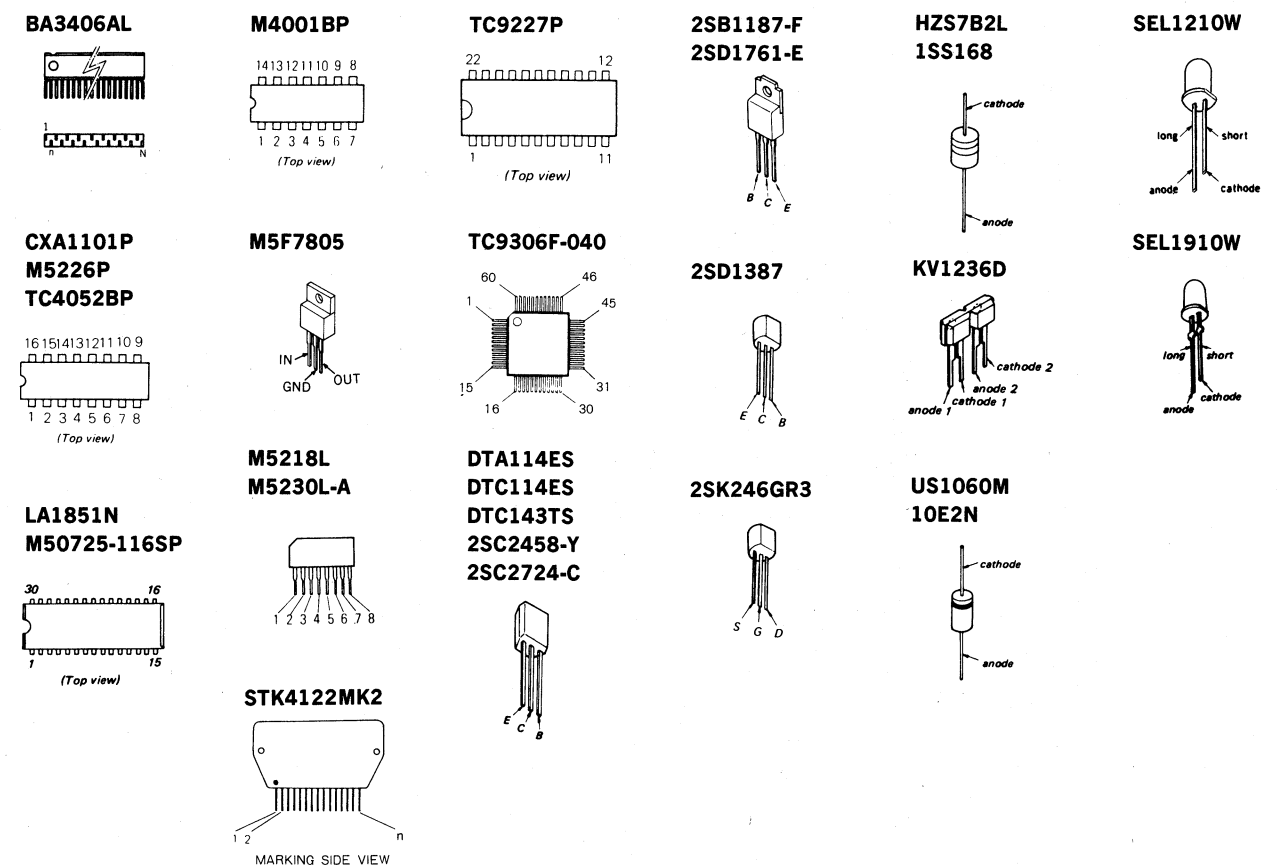
MW (AM) Tuned Indication Lighting Level Adjustment

BAND select switch: MW (AM)

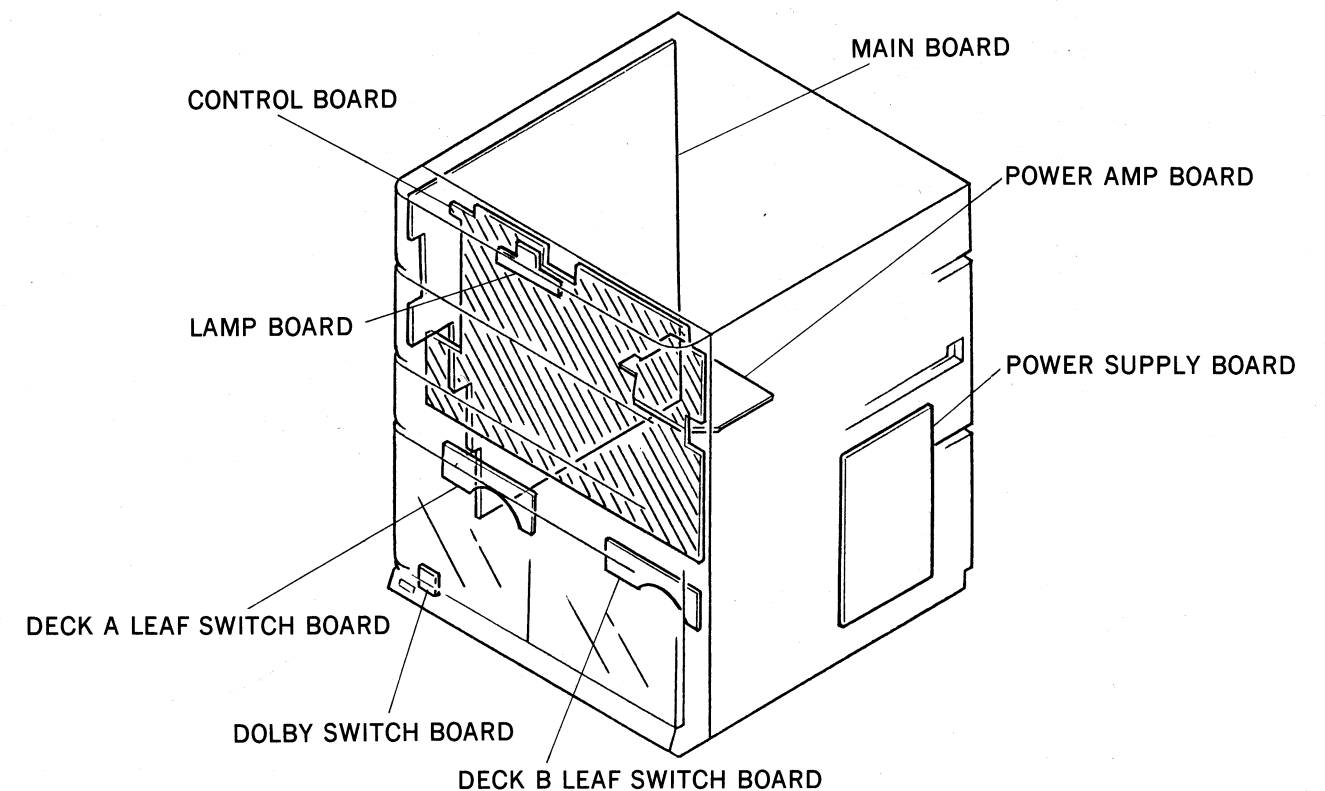
- Output 0.45mV (53dB), 1,404kHz from AM RF signal generator.
- Adjust RV102 so that the LCD **TUNED** light up.

SECTION 5 DIAGRAMS

5-1. SEMICONDUCTOR LEAD LAYOUTS



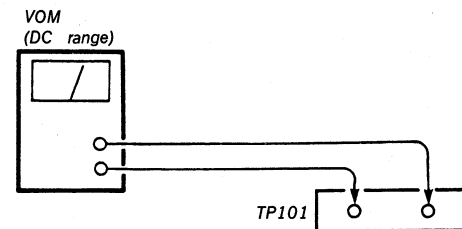
5-2. CIRCUIT BOARD LOCATION



LW OSC Voltage Adjustment

Procedure:

1. Connect the VOM to D002-2 cathode (VT).
2. Set the BAND selector switch to LW.
3. Push the TUNING (+, -) button for 153kHz (IT: 144kHz) Adjust L001 for 0.9 to 1.1V reading on the VOM.
4. Push the button for 281kHz (IT: 288kHz). Adjust CT001 for 8.7 to 9.3V reading on the VOM.



Procedure:

1. Push the TUNING (+, -) button for 98 MHz.
2. Adjust IFT101 for 0V reading on the VOM.

Note: FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level Adjustment

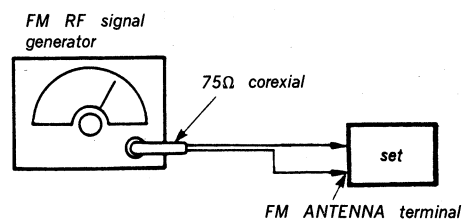
BAND select switch: FM

1. Output 40 μ V (32dB), 98MHz from FM RF signal generator.
2. Adjust RV101 so that the LCD **TUNED** light up.

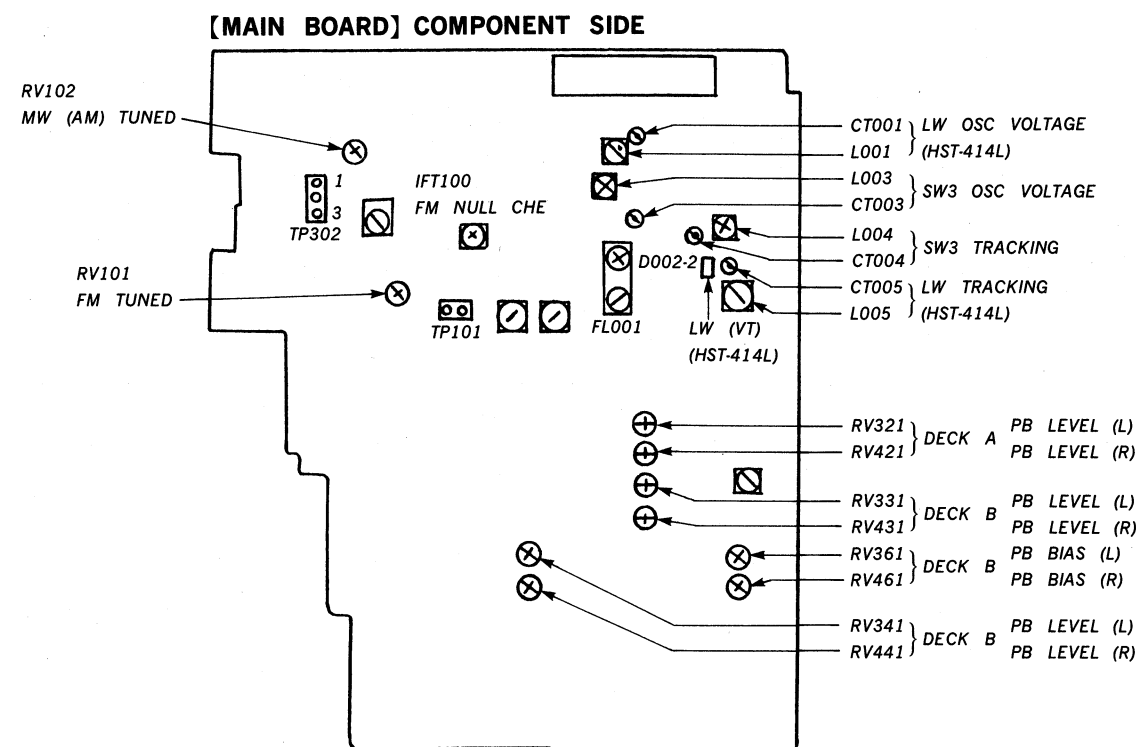
FM SECTION

FM Discriminator Alignment (NULL Check)

Setting:



Carrier frequency: 98MHz
Modulation:
(AEP, Saudi Arabia): 1kHz, 75kHz deviation
(WG, IT): 1kHz, 40kHz deviation
Output level: 1mV (60 dB)

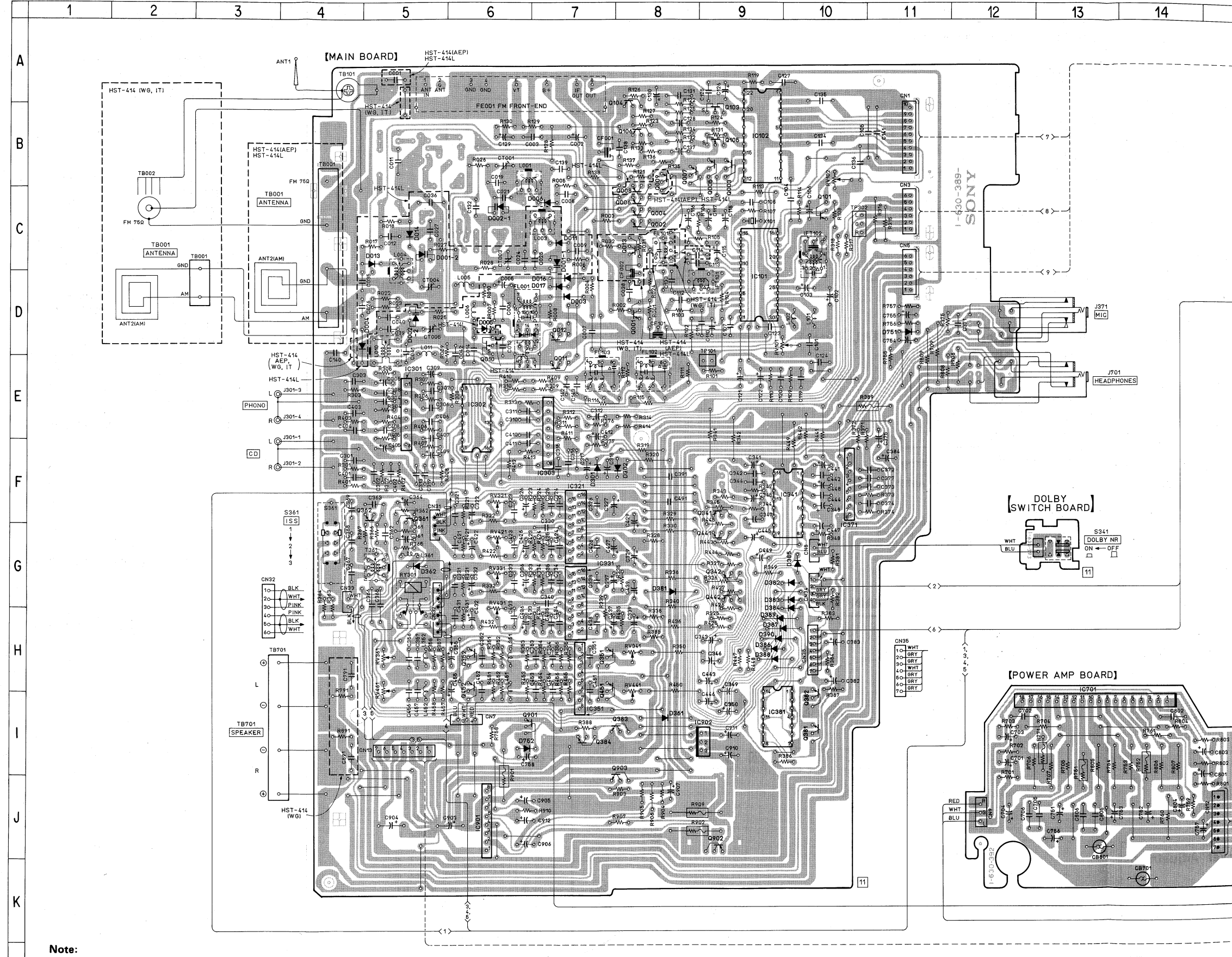


5-3. PRINTED WIRING BOARDS

● Refer to page8 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100-1	C-7	IC101	D-9
D001-2	C-5	IC102	B-9
D002-1	C-6	IC201	G-28
D002-2	D-5	IC301	E-5
D003	D-7	IC302	E-6
D004	D-4	IC303	E-7
D005	D-6	IC321	G-7
D006	C-7	IC331	G-7
D011	C-7	IC341	F-10
D013	C-5	IC351	H-7
D014	C-5	IC371	F-10
D016	D-7	IC381	I-9
D017	D-7	IC501	J-29
D201	H-28	IC502	J-26
D202	G-27	IC551	G-25
D203	F-27	IC601	J-25
D204	F-27	IC701	I-13
D205	F-27	IC901	J-6
D207	F-27		
D208	F-27	Q001	D-8
D209	F-27	Q002	C-8
D210	E-27	Q003	B-9
D211	E-27	Q004	C-8
D214	F-27	Q005	B-9
D215	F-27	Q006	C-8
D216	F-28	Q007	B-8
D301	F-7	Q008	C-8
D302	F-8	Q009	B-8
D361	I-8	Q010	D-6
D362	G-5	Q011	E-7
D381	G-8	Q012	D-7
D382	G-10	Q013	C-8
D383	G-10	Q101	C-10
D384	H-10	Q103	B-9
D385	G-10	Q104	B-8
D386	H-9	Q105	B-9
D387	H-9	Q106	B-8
D388	H-9	Q201	G-29
D389	H-9	Q341	F-9
D390	H-9	Q342	G-9
D501	I-28	Q351	H-7
D502	I-28	Q352	H-6
D503	G-27	Q361	F-5
D505	H-29	Q362	F-5
D506	H-28	Q381	I-10
D507	H-27	Q382	I-10
D508	H-26	Q383	I-8
D509	J-27	Q384	I-7
D510	J-27	Q441	G-9
D511	G-30	Q442	G-9
D512	J-27	Q451	H-7
D513	I-27	Q552	H-6
D514	I-27	Q501	J-27
D751	D-11	Q502	I-27
D752	I-6	Q551	G-30
D911	E-19	Q552	I-28
(HST-414)		Q553	H-26
D912	E-19	Q601	I-27
(HST-414)		Q602	I-26
D911	H-19	Q901	I-6
(HST-414L)		Q902	J-9
D912	H-19	Q903	I-8
(HST-414L)			



Note:

- ○ — : parts extracted from the component side.
- ● — : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- □ → : indicates side identified with part number.

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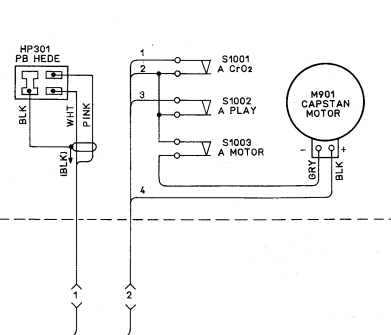
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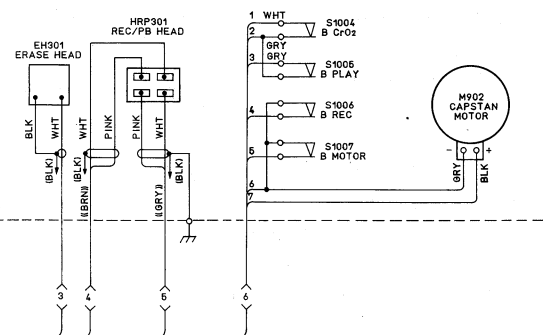
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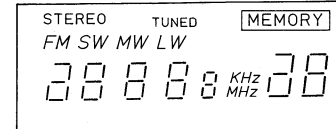
DECK A



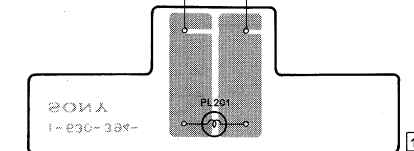
DECK B



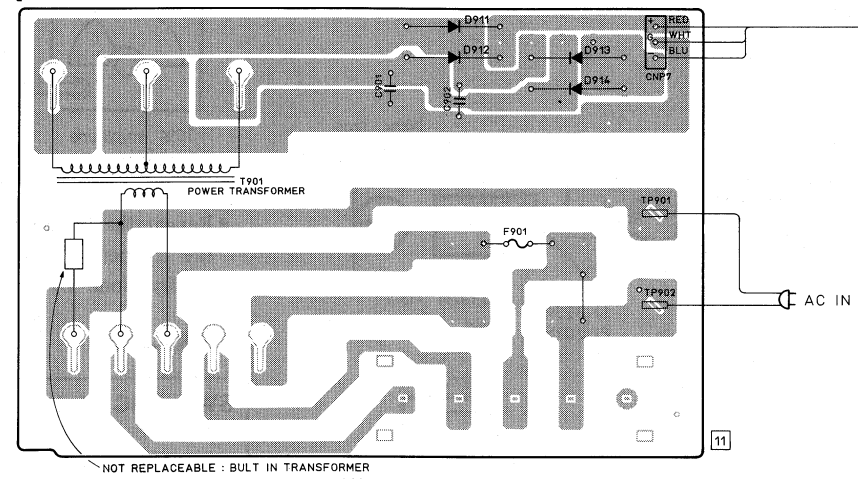
LCD1 LIQUID CRYSTAL DISPLAY



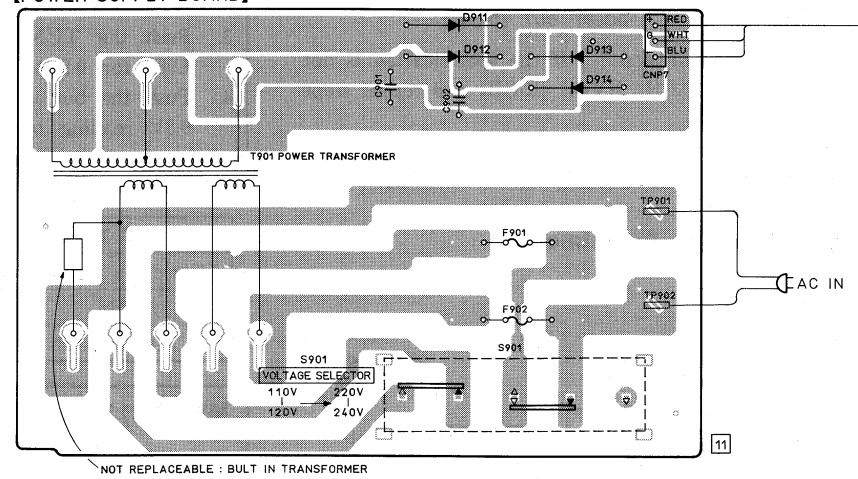
[LAMP BOARD]



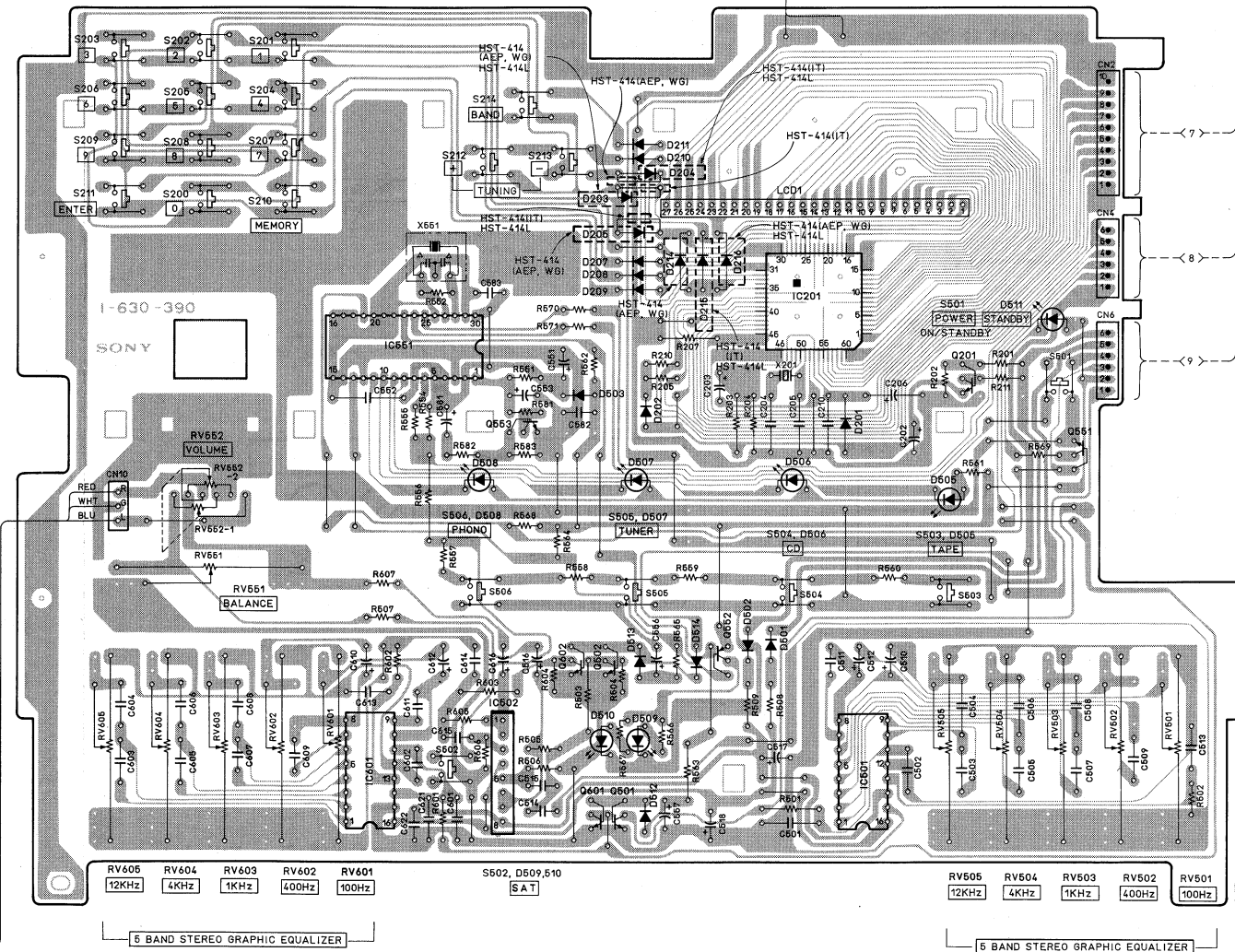
[POWER SUPPLY BOARD] HST-414



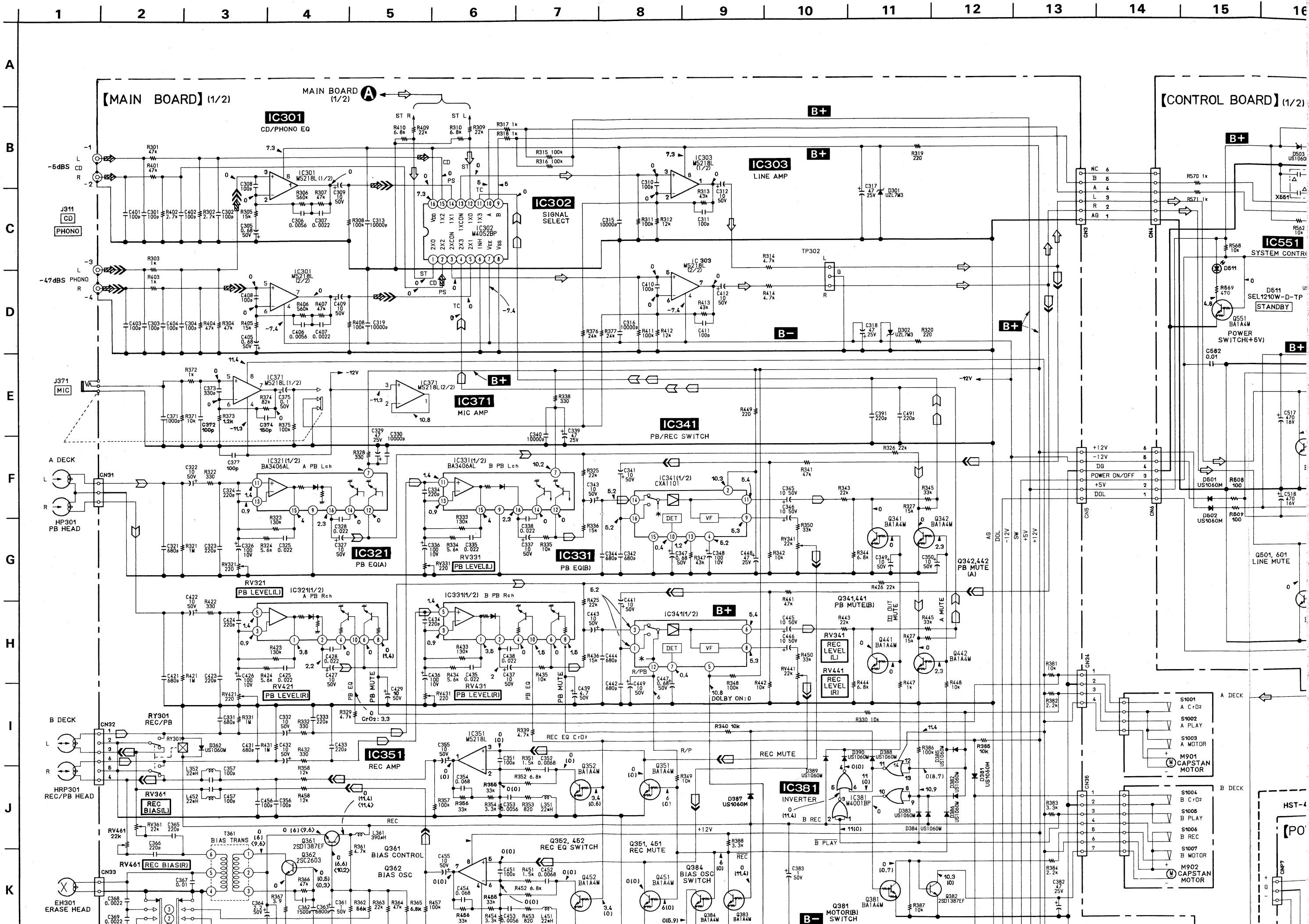
[POWER SUPPLY BOARD] HST-414L

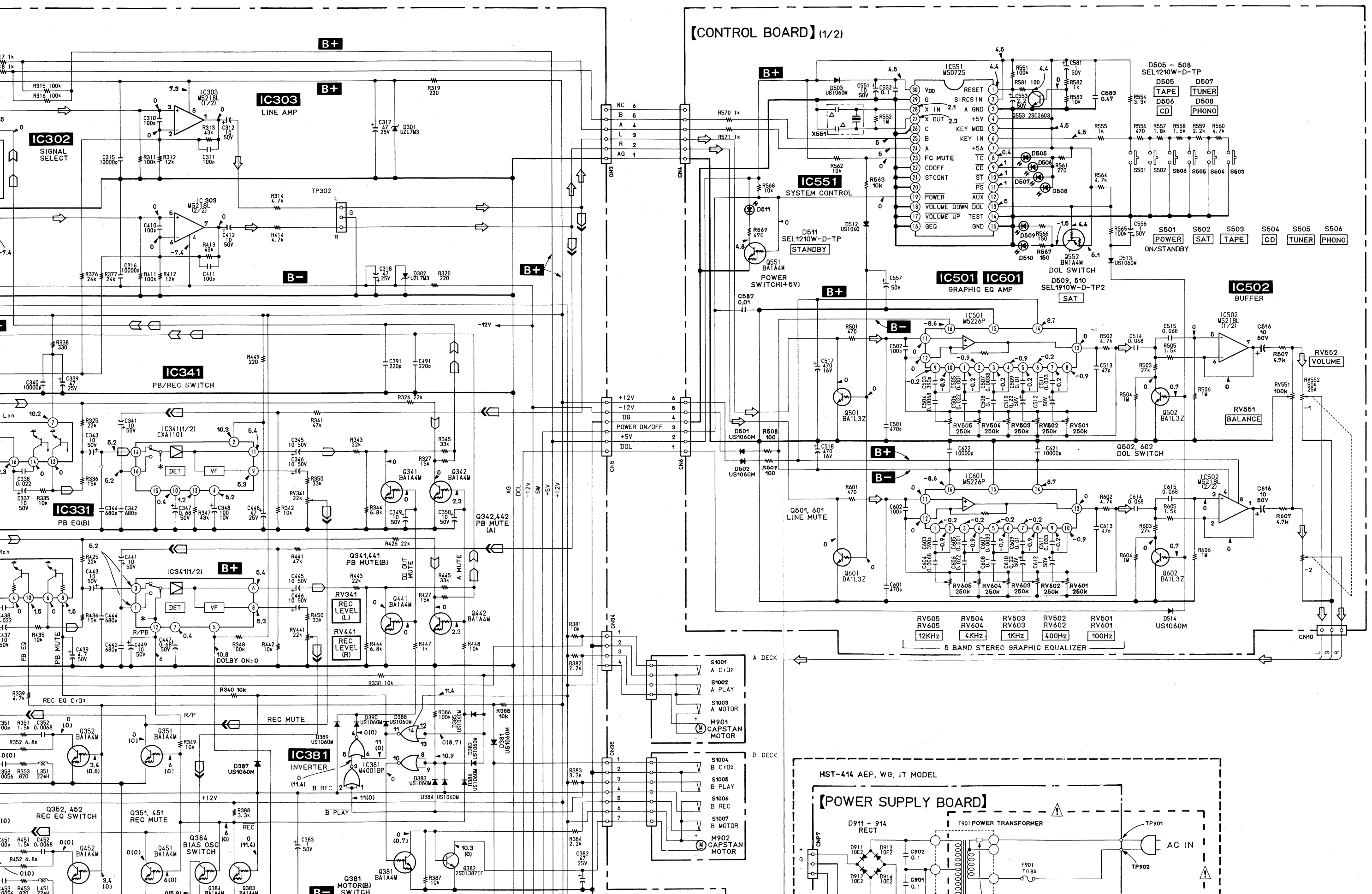


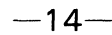
[CONTROL BOARD]

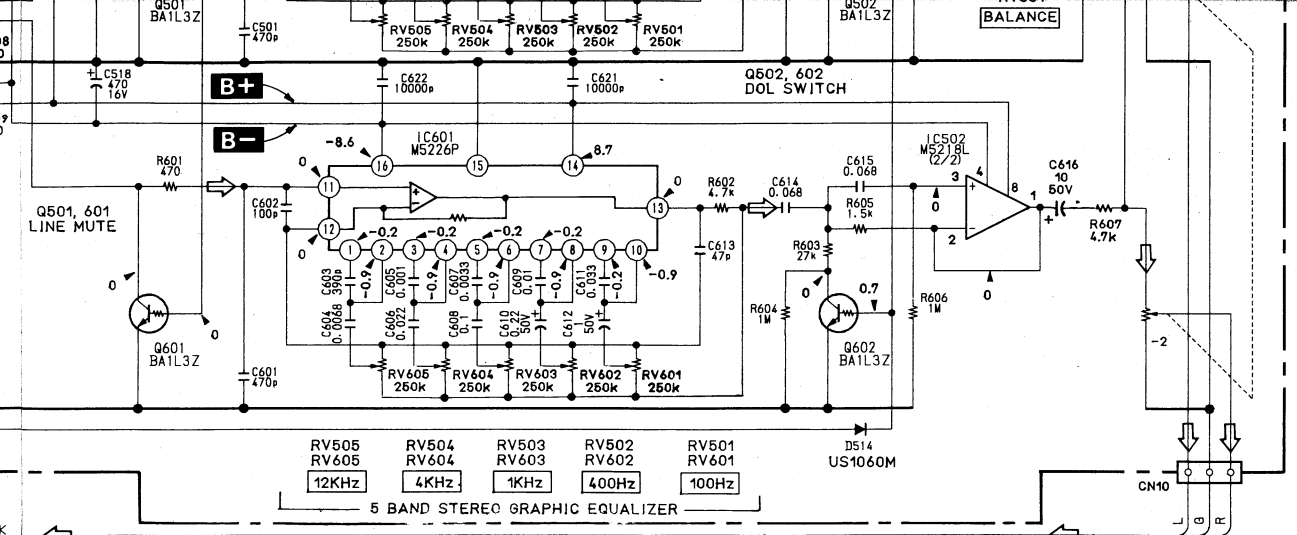


5-4. SCHEMATIC DIAGRAM —DECK AMP SECTION— • Refer to page19 for IC Block Diagram.







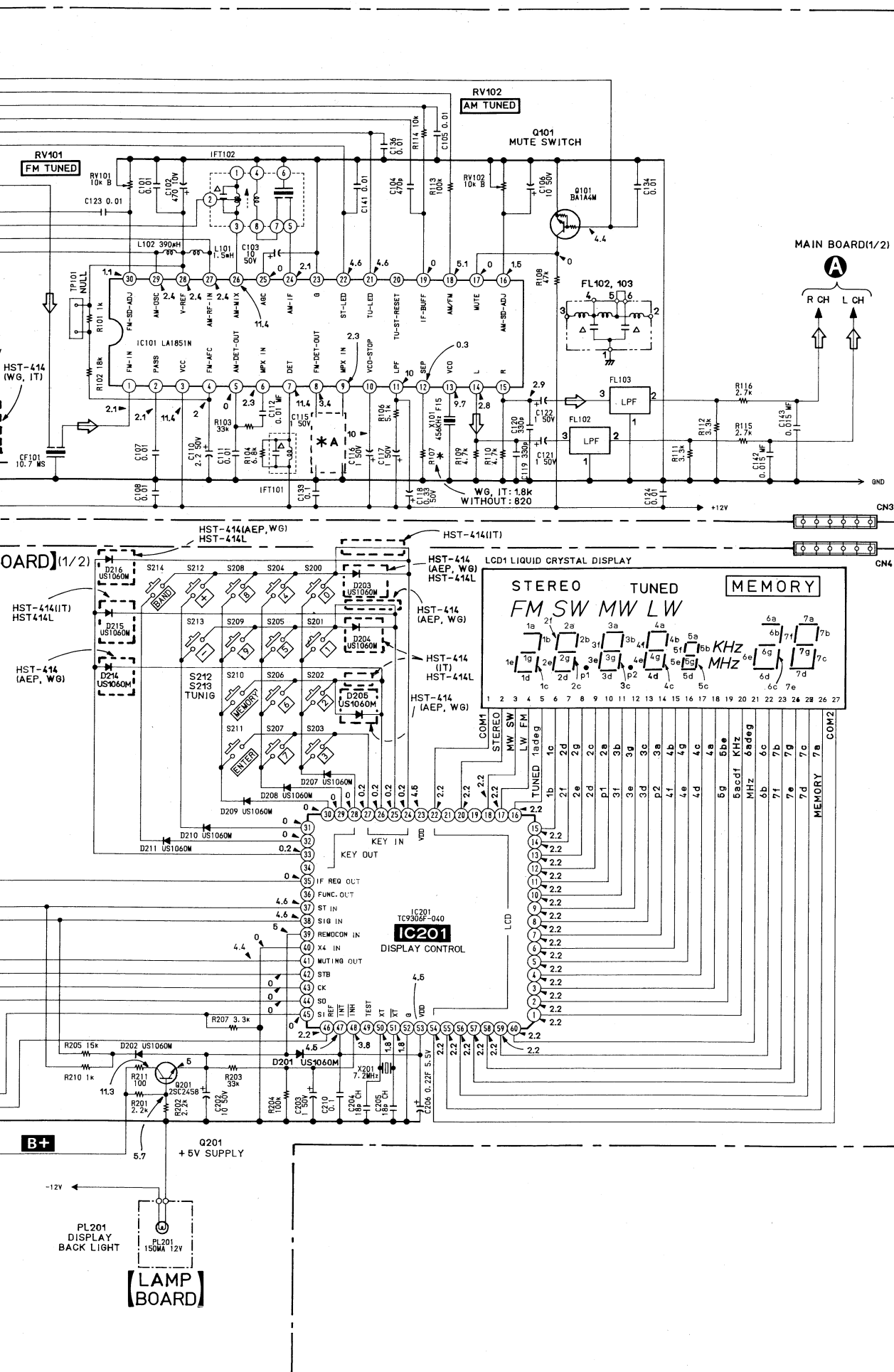


- Voltages are taken with a VOM (input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

- Signal path.
 - ➡ : FM
 - : PB (DECK A)
 - : PB (DECK B)
 - ➡ : REC (DECK B)
 - ⚡ : CD
 - ⚡➤➤➤ : PHONO

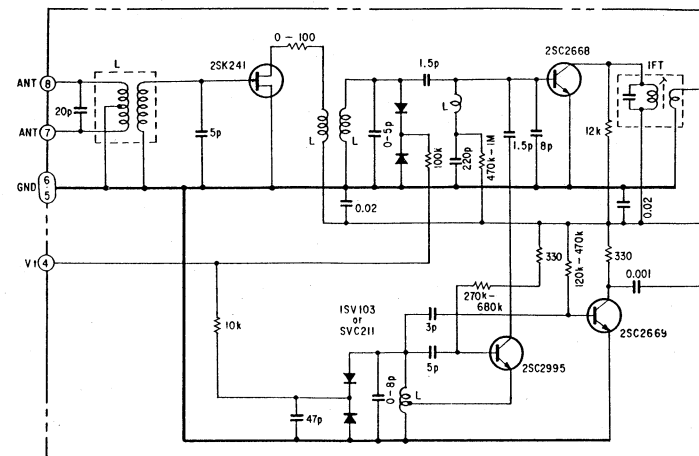
13



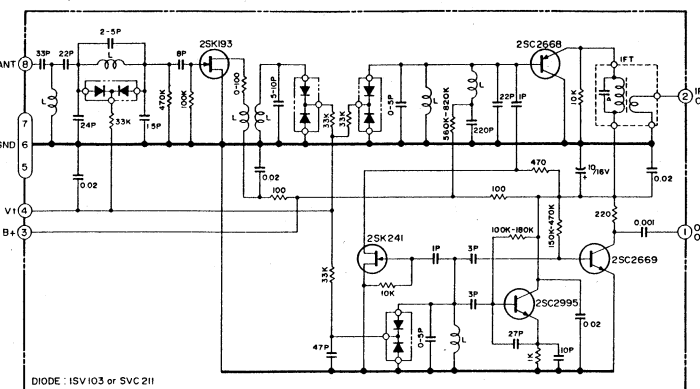


FM FRONT-END (FE 101)

AEP, Saudi Arabia model



WG, IT model



SECTION 6 EXPLODED VIEWS

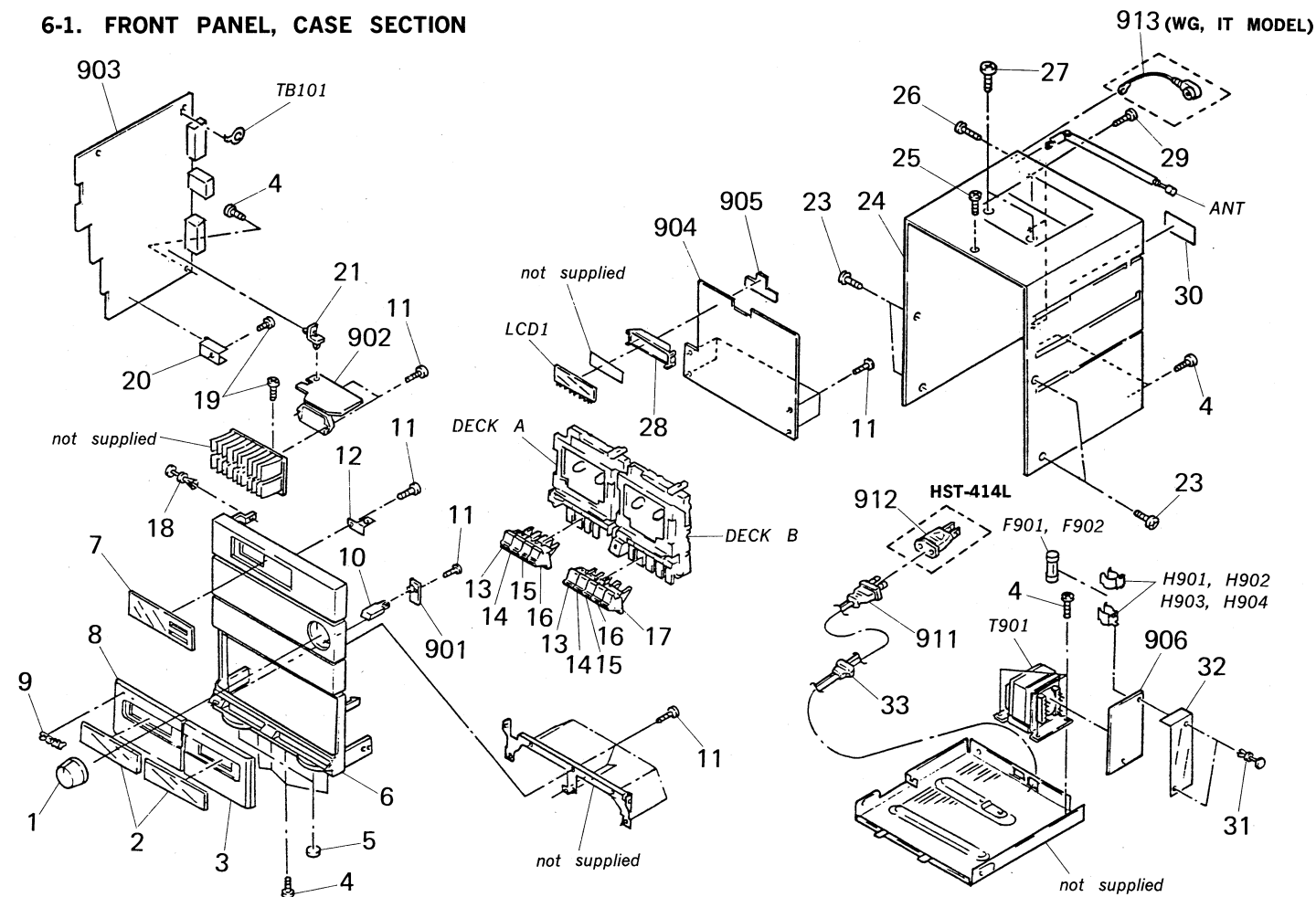
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- EA.....Saudi Arabia.

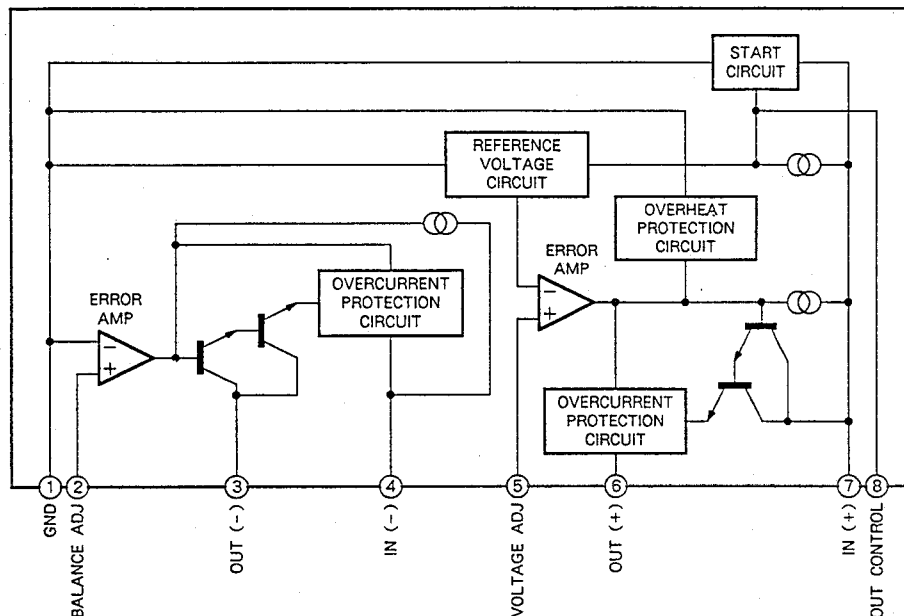
The components identified by mark **A** or dotted line with mark **A** are critical for safety. Replace only with part number specified.

6-1. FRONT PANEL, CASE SECTION

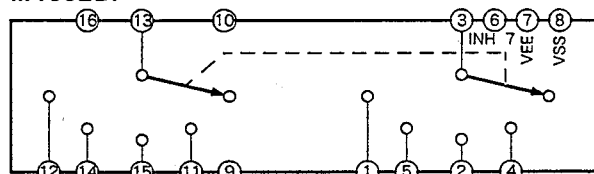


● IC BLOCK DIAGRAMS

M5230L-A



M4052BP



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-922-790-21	KNOB (VOLUME)		30	*4-928-680-01	(414L).....LABEL, MODEL NUMBER (Saudi Arabia)	
2	4-931-101-01	WINDOW (CASSETTE)			*4-928-682-01	(414:AEP)...LABEL, MODEL NUMBER (AE)	
3	4-931-104-01	LID (B), CASSETTE			*4-928-684-01	(414:WG)....LABEL, MODEL NUMBER (WG)	
4	7-682-547-04	SCREW +BVT 3X6 (S)			*4-928-685-01	(414:IT)....LABEL, MODEL NUMBER (IT)	
5	3-319-288-01	FOOT		31	4-812-134-00	RIVET NYLON, 3.5	
6	X-4915-472-1	(414L)...PANEL ASSY		32	*4-928-677-01	COVER (INSULATING)	
	X-4915-473-1	(414)....PANEL ASSY		33	*3-703-244-00	BUSHING (2104), CORD	
7	4-928-655-01	PLATE (ST), ORNAMENTAL		901	*1-630-393-11	PC BOARD, DOLBY SW	
8	4-931-103-01	LID (A), CASSETTE		902	*1-630-392-11	PC BOARD, POWER AMP	
9	4-920-869-11	EMBLEM, SONY		903	*A-4333-233-A	(414:WG)....MOUNTED PCB, MAIN	
10	4-928-699-01	BUTTON (DOLBY)			*A-4333-236-A	(414:AEP)...MOUNTED PCB, MAIN	
11	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S			*A-4333-239-A	(414L)....MOUNTED PCB, MAIN	
12	*4-928-660-01	BRACKET (CASE)			*A-4333-253-A	(414:IT)....MOUNTED PCB, MAIN	
13	4-928-697-01	BUTTON (TC)(▷)		904	*A-4333-230-A	(414:IT)....MOUNTED PCB, CONTROL	
14	4-928-697-11	BUTTON (TC)(◀◀)			*A-4333-234-A	(414:WG)....MOUNTED PCB, CONTROL	
15	4-928-697-21	BUTTON (TC)(▶▶)			*A-4333-237-A	(414:AEP)...MOUNTED PCB, CONTROL	
16	4-928-697-31	BUTTON (TC)(■▲)			*A-4333-240-A	(414L)....MOUNTED PCB, CONTROL	
17	4-928-697-41	BUTTON (TC)(■)		905	*1-630-394-11	PC BOARD, LAMP	
18	4-812-134-31	RIVET NYLON, 3.5		906	*1-630-391-11	PC BOARD, POWER SUPPLY	
19	7-682-548-04	SCREW +BVT 3X8 (S)		911	△.1-555-750-00	CORD, POWER	
20	*3-309-144-21	HEAT SINK		912	△.1-506-401-00	(414L)...ADAPTOR, CONVERSION	
21	*4-922-413-01	HOLDER, PC BOARD		913	*1-562-908-11	(414:WG,IT)..CONNECTOR, FEMALE(NO SHIELD)	
22	7-685-650-79	SCREW +BVT 3X16 TYPE2 IT-3		ANT1	1-501-270-00	ANTENNA, TELESCOPIC (FM)	
23	3-704-366-01	SCREW (CASE) (M3X8)		F901	△.1-532-215-00	FUSE, TIME-LAG (0.8A)	
24	X-4915-470-1	(414L).....CASE ASSY		F902	△.1-532-215-00	(414L)...FUSE, TIME-LAG (0.8A)	
	X-4915-471-1	(414:WG,IT)...CASE ASSY		H901	*1-533-213-31	(414L)...HOLDER, FUSE	
	X-4915-474-1	(414:AEP)....CASE ASSY		H902	*1-533-213-31	HOLDER, FUSE	
25	7-682-547-09	SCREW +B 3X6		H903	*1-533-213-31	(414L)...HOLDER, FUSE	
26	7-682-550-09	SCREW +B 3X12		H904	*1-533-213-31	HOLDER, FUSE	
27	7-685-649-01	SCREW +BVT 3X14 TYPE1		LCD1	1-808-659-11	DISPLAY PANEL, LIQUID CRYSTAL	
28	*4-928-665-01	HOUSE (LCD), WRITING		T901	△.1-449-544-11	(414L)...TRANSFORMER, POWER	
29	7-685-647-79	SCREW +BVT 3X10 TYPE2 N-S		T901	△.1-449-618-11	(414)...TRANSFORMER, POWER	
				TB101	*4-925-530-01	PLATE, GROUND	

SECTION 7 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA....: μ A...., UPA....: μ PA....,UPC....: μ PC, UPD....: μ PD....

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901	*1-630-393-11	PC BOARD, DOLBY SW	C101	1-161-379-00	CERAMIC 0.01MF 30% 16V
902	*1-630-392-11	PC BOARD, POWER AMP	C102	1-124-472-11	ELECT 470MF 20% 10V
903	*A-4333-233-A	(414:WG)....MOUNTED PCB, MAIN	C103	1-123-875-11	ELECT 10MF 20% 50V
	*A-4333-236-A	(414:AEP)....MOUNTED PCB, MAIN	C104	1-162-290-31	CERAMIC 470PF 10% 50V
	*A-4333-239-A	(414L).....MOUNTED PCB, MAIN	C105	1-161-379-00	CERAMIC 0.01MF 30% 16V
	*A-4333-253-A	(414:IT)....MOUNTED PCB, MAIN	C106	1-123-875-11	ELECT 10MF 20% 50V
904	*A-4333-230-A	(414:IT)....MOUNTED PCB, CONTROL	C107	1-161-379-00	CERAMIC 0.01MF 30% 16V
	*A-4333-234-A	(414:WG)....MOUNTED PCB, CONTROL	C108	1-161-379-00	CERAMIC 0.01MF 30% 16V
	*A-4333-237-A	(414:AEP)....MOUNTED PCB, CONTROL	C110	1-124-925-11	ELECT 2.2MF 20% 50V
	*A-4333-240-A	(414L).....MOUNTED PCB, CONTROL	C111	1-161-379-00	CERAMIC 0.01MF 30% 16V
905	*1-630-394-11	PC BOARD, LAMP	C112	1-136-153-00	FILM 0.01MF 5% 50V
906	*1-630-391-11	PC BOARD, POWER SUPPLY	C113	1-162-211-31	(414:AEP/414L) ...CERAMIC 33PF 5% 50V
911	Δ 1-555-750-00	CORD, POWER	C113	1-162-291-31	(414:WG,IT) ...CERAMIC 560PF 10% 50V
912	Δ 1-506-401-00	(414L)...ADAPTOR, CONVERSION	C114	1-162-282-31	(414:WG,IT) ...CERAMIC 100PF 10% 50V
913	*1-562-908-11	(414:WG,IT)...CONNECTOR, FEMALE (NO SHIELD)	C115	1-124-499-11	ELECT 1MF 20% 50V
ANT1	1-501-270-00	ANTENNA, TELESCOPIC (FM)	C116	1-124-499-11	ELECT 1MF 20% 50V
C001	1-162-195-31	CERAMIC 4.7PF 10% 50V	C117	1-124-499-11	ELECT 1MF 20% 50V
C002	1-123-875-11	ELECT 10MF 20% 50V	C118	1-124-252-00	ELECT 0.33MF 20% 50V
C003	1-161-379-00	CERAMIC 0.01MF 30% 16V	C119	1-162-288-31	CERAMIC 330PF 10% 50V
C005	1-123-875-11	ELECT 10MF 20% 50V	C120	1-162-288-31	CERAMIC 330PF 10% 50V
C006	1-161-379-00	CERAMIC 0.01MF 30% 16V	C121	1-124-499-11	ELECT 1MF 20% 50V
C007	1-164-159-11	CERAMIC 0.1MF 50V	C122	1-124-499-11	ELECT 1MF 20% 50V
C008	1-164-159-11	CERAMIC 0.1MF 50V	C123	1-161-379-00	CERAMIC 0.01MF 30% 16V
C009	1-164-159-11	(414L)...CERAMIC 0.1MF 50V	C124	1-161-379-00	CERAMIC 0.01MF 30% 16V
C011	1-164-159-11	CERAMIC 0.1MF 50V	C125	1-161-379-00	CERAMIC 0.01MF 30% 16V
C012	1-161-379-00	(414L)...CERAMIC 0.01MF 30% 16V	C126	1-123-875-11	ELECT 10MF 20% 50V
C013	1-162-288-31	CERAMIC 330PF 10% 50V	C127	1-161-379-00	CERAMIC 0.01MF 30% 16V
C014	1-164-159-11	CERAMIC 0.1MF 50V	C128	1-124-925-11	ELECT 2.2MF 20% 50V
C019	1-101-361-00	(414:AEP, WG/414L) ...CERAMIC 150PF 5% 50V	C129	1-124-463-00	ELECT 0.1MF 20% 50V
C019	1-101-081-00	(414:IT)...CERAMIC 130PF 5% 50V	C130	1-124-477-11	ELECT 47MF 20% 25V
C021	1-103-707-00	(414L)...POLYSTYRENE 180PF 5% 50V	C131	1-161-379-00	CERAMIC 0.01MF 30% 16V
C024	1-102-945-00	(414L)...CERAMIC 8PF 0.5PF 50V	C132	1-136-157-00	FILM 0.022MF 5% 50V
C025	1-130-480-00	(414L)...MYLAR 0.0056MF 5% 50V	C133	1-164-159-11	CERAMIC 0.1MF 50V
C026	1-136-173-00	(414L)...FILM 0.47MF 5% 50V	C134	1-161-379-00	CERAMIC 0.01MF 30% 16V
C027	1-161-379-00	(414L)...CERAMIC 0.01MF 30% 16V	C135	1-161-379-00	CERAMIC 0.01MF 30% 16V
C035	1-161-379-00	(414L)...CERAMIC 0.01MF 30% 16V	C136	1-161-379-00	CERAMIC 0.01MF 30% 16V
C036	1-161-379-00	(414L)...CERAMIC 0.01MF 30% 16V	C137	1-124-902-00	ELECT 0.47MF 20% 50V
C038	1-162-215-31	CERAMIC 47PF 5% 50V	C138	1-136-157-00	FILM 0.022MF 5% 50V
C039	1-102-815-00	(414:AEP, WG/414L) ...CERAMIC 110PF 5% 50V	C139	1-136-157-00	FILM 0.022MF 5% 50V
C039	1-101-888-00	(414:IT)...CERAMIC 68PF 5% 50V	C140	1-161-379-00	CERAMIC 0.01MF 30% 16V
C040	1-161-379-00	CERAMIC 0.01MF 30% 16V	C141	1-161-379-00	CERAMIC 0.01MF 30% 16V
C041	1-161-374-11	CERAMIC 0.0015MF 30% 16V	C142	1-136-155-00	FILM 0.015MF 5% 50V
C042	1-102-120-00	CERAMIC 0.0018MF 10% 50V			

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C143	1-136-155-00	FILM	0.015MF	5%	50V	C353	1-130-480-00	MYLAR	0.0056MF	5%	50V
C202	1-123-875-11	ELECT	10MF	20%	50V	C354	1-136-163-00	FILM	0.068MF	5%	50V
C203	1-124-499-11	ELECT	1MF	20%	50V	C355	1-123-875-11	ELECT	10MF	20%	50V
C204	1-162-205-31	CERAMIC	18PF	5%	50V	C356	1-162-282-31	CERAMIC	100PF	10%	50V
C205	1-162-205-31	CERAMIC	18PF	5%	50V	C357	1-162-282-31	CERAMIC	100PF	10%	50V
C206	1-125-486-11	CAP,DOUBLE LAYERS	0.22F		5.5V	C361	1-124-499-11	ELECT	1MF	20%	50V
C210	1-164-159-11	CERAMIC	0.1MF		50V	C362	1-161-374-11	CERAMIC	0.0015MF	30%	16V
C301	1-162-282-31	CERAMIC	100PF	10%	50V	C363	1-161-329-00	CERAMIC	0.0068MF	30%	16V
C302	1-162-282-31	CERAMIC	100PF	10%	50V	C364	1-124-925-11	ELECT	2.2MF	20%	50V
C303	1-162-282-31	CERAMIC	100PF	10%	50V	C365	1-162-286-31	CERAMIC	220PF	10%	50V
C304	1-162-282-31	CERAMIC	100PF	10%	50V	C366	1-162-286-31	CERAMIC	220PF	10%	50V
C305	1-124-254-00	ELECT	0.68MF	20%	50V	C367	1-136-153-00	FILM	0.01MF	5%	50V
C306	1-130-480-00	MYLAR	0.0056MF	5%	50V	C368	1-130-475-00	MYLAR	0.0022MF	5%	50V
C307	1-130-475-00	MYLAR	0.0022MF	5%	50V	C369	1-130-475-00	MYLAR	0.0022MF	5%	50V
C308	1-162-282-31	CERAMIC	100PF	10%	50V	C371	1-162-294-31	CERAMIC	0.001MF	10%	50V
C309	1-123-875-11	ELECT	10MF	20%	50V	C372	1-162-282-31	CERAMIC	100PF	10%	50V
C310	1-162-282-31	CERAMIC	100PF	10%	50V	C373	1-162-288-31	CERAMIC	330PF	10%	50V
C311	1-162-282-31	CERAMIC	100PF	10%	50V	C374	1-162-284-31	CERAMIC	150PF	10%	50V
C312	1-123-875-11	ELECT	10MF	20%	50V	C375	1-124-463-00	ELECT	0.1MF	20%	50V
C313	1-161-379-00	CERAMIC	0.01MF	30%	16V	C376	1-162-282-31	CERAMIC	100PF	10%	50V
C315	1-161-379-00	CERAMIC	0.01MF	30%	16V	C377	1-162-282-31	CERAMIC	100PF	10%	50V
C316	1-161-379-00	CERAMIC	0.01MF	30%	16V	C382	1-124-477-11	ELECT	47MF	20%	25V
C317	1-124-477-11	ELECT	47MF	20%	25V	C383	1-124-499-11	ELECT	1MF	20%	50V
C318	1-124-477-11	ELECT	47MF	20%	25V	C384	1-124-120-11	ELECT	220MF	20%	16V
C319	1-161-379-00	CERAMIC	0.01MF	30%	16V	C391	1-162-286-31	CERAMIC	220PF	10%	50V
C321	1-162-292-31	CERAMIC	680PF	10%	50V	C401	1-162-282-31	CERAMIC	100PF	10%	50V
C322	1-123-875-11	ELECT	10MF	20%	50V	C402	1-162-282-31	CERAMIC	100PF	10%	50V
C323	1-162-286-31	CERAMIC	220PF	10%	50V	C403	1-162-282-31	CERAMIC	100PF	10%	50V
C324	1-162-286-31	CERAMIC	220PF	10%	50V	C404	1-162-282-31	CERAMIC	100PF	10%	50V
C325	1-136-157-00	FILM	0.022MF	5%	50V	C405	1-124-254-00	ELECT	0.68MF	20%	50V
C326	1-124-443-00	ELECT	100MF	20%	10V	C406	1-130-480-00	MYLAR	0.0056MF	5%	50V
C327	1-123-875-11	ELECT	10MF	20%	50V	C407	1-130-475-00	MYLAR	0.0022MF	5%	50V
C328	1-136-157-00	FILM	0.022MF	5%	50V	C408	1-162-282-31	CERAMIC	100PF	10%	50V
C329	1-124-477-11	ELECT	47MF	20%	25V	C409	1-123-875-11	ELECT	10MF	20%	50V
C330	1-161-379-00	CERAMIC	0.01MF	30%	16V	C410	1-162-282-31	CERAMIC	100PF	10%	50V
C331	1-162-292-31	CERAMIC	680PF	10%	50V	C411	1-162-282-31	CERAMIC	100PF	10%	50V
C332	1-123-875-11	ELECT	10MF	20%	50V	C412	1-123-875-11	ELECT	10MF	20%	50V
C333	1-162-286-31	CERAMIC	220PF	10%	50V	C421	1-162-292-31	CERAMIC	680PF	10%	50V
C334	1-162-286-31	CERAMIC	220PF	10%	50V	C422	1-123-875-11	ELECT	10MF	20%	50V
C335	1-136-157-00	FILM	0.022MF	5%	50V	C423	1-162-286-31	CERAMIC	220PF	10%	50V
C336	1-124-443-00	ELECT	100MF	20%	10V	C424	1-162-286-31	CERAMIC	220PF	10%	50V
C337	1-123-875-11	ELECT	10MF	20%	50V	C425	1-136-157-00	FILM	0.022MF	5%	50V
C338	1-136-157-00	FILM	0.022MF	5%	50V	C426	1-124-443-00	ELECT	100MF	20%	10V
C339	1-124-477-11	ELECT	47MF	20%	25V	C427	1-123-875-11	ELECT	10MF	20%	50V
C340	1-161-379-00	CERAMIC	0.01MF	30%	16V	C428	1-136-157-00	FILM	0.022MF	5%	50V
C341	1-123-875-11	ELECT	10MF	20%	50V	C429	1-123-875-11	ELECT	10MF	20%	50V
C342	1-162-292-31	CERAMIC	680PF	10%	50V	C431	1-162-292-31	CERAMIC	680PF	10%	50V
C343	1-123-875-11	ELECT	10MF	20%	50V	C432	1-123-875-11	ELECT	10MF	20%	50V
C344	1-162-292-31	CERAMIC	680PF	10%	50V	C433	1-162-286-31	CERAMIC	220PF	10%	50V
C345	1-123-875-11	ELECT	10MF	20%	50V	C434	1-162-286-31	CERAMIC	220PF	10%	50V
C346	1-123-875-11	ELECT	10MF	20%	50V	C435	1-136-157-00	FILM	0.022MF	5%	50V
C347	1-124-254-00	ELECT	0.68MF	20%	50V	C436	1-124-443-00	ELECT	100MF	20%	10V
C348	1-124-443-00	ELECT	100MF	20%	10V	C437	1-123-875-11	ELECT	10MF	20%	50V
C349	1-123-875-11	ELECT	10MF	20%	50V	C438	1-136-157-00	FILM	0.022MF	5%	50V
C350	1-123-875-11	ELECT	10MF	20%	50V	C439	1-123-875-11	ELECT	10MF	20%	50V
C351	1-162-282-31	CERAMIC	100PF	10%	50V	C441	1-123-875-11	ELECT	10MF	20%	50V
C352	1-130-481-00	MYLAR	0.0068MF	5%	50V	C442	1-162-292-31	CERAMIC	680PF	10%	50V

HST-414/414L

Ref.No.	Part No.	Description							
C443	1-123-875-11	ELECT	10MF	20%	50V				
C444	1-162-292-31	CERAMIC	680PF	10%	50V				
C445	1-123-875-11	ELECT	10MF	20%	50V				
C446	1-123-875-11	ELECT	10MF	20%	50V				
C447	1-124-254-00	ELECT	0.68MF	20%	50V				
C448	1-124-477-11	ELECT	47MF	20%	25V				
C449	1-123-875-11	ELECT	10MF	20%	50V				
C451	1-162-282-31	CERAMIC	100PF	10%	50V				
C452	1-130-481-00	MYLAR	0.0068MF	5%	50V				
C453	1-130-480-00	MYLAR	0.0056MF	5%	50V				
C454	1-136-163-00	FILM	0.068MF	5%	50V				
C455	1-123-875-11	ELECT	10MF	20%	50V				
C456	1-162-282-31	CERAMIC	100PF	10%	50V				
C457	1-162-282-31	CERAMIC	100PF	10%	50V				
C491	1-162-286-31	CERAMIC	220PF	10%	50V				
C501	1-162-290-31	CERAMIC	470PF	10%	50V				
C502	1-162-282-31	CERAMIC	100PF	10%	50V				
C503	1-162-289-31	CERAMIC	390PF	10%	50V				
C504	1-161-329-00	CERAMIC	0.0068MF	30%	16V				
C505	1-162-294-31	CERAMIC	0.001MF	10%	50V				
C506	1-161-494-00	CERAMIC	0.022MF		25V				
C507	1-161-327-00	CERAMIC	0.0033MF	30%	16V				
C508	1-164-159-11	CERAMIC	0.1MF		50V				
C509	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C510	1-124-464-11	ELECT	0.22MF	20%	50V				
C511	1-136-159-00	FILM	0.033MF	5%	50V				
C512	1-124-499-11	ELECT	1MF	20%	50V				
C513	1-162-215-31	CERAMIC	47PF	5%	50V				
C514	1-136-163-00	FILM	0.068MF	5%	50V				
C515	1-136-163-00	FILM	0.068MF	5%	50V				
C516	1-123-875-11	ELECT	10MF	20%	50V				
C517	1-126-103-11	ELECT	470MF	20%	16V				
C518	1-126-103-11	ELECT	470MF	20%	16V				
C551	1-123-875-11	ELECT	10MF	20%	50V				
C552	1-164-159-11	CERAMIC	0.1MF		50V				
C553	1-124-925-11	ELECT	2.2MF	20%	50V				
C556	1-124-499-11	ELECT	1MF	20%	50V				
C557	1-124-499-11	ELECT	1MF	20%	50V				
C581	1-124-499-11	ELECT	1MF	20%	50V				
C582	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C583	1-136-173-00	FILM	0.47MF	5%	50V				
C601	1-162-290-31	CERAMIC	470PF	10%	50V				
C602	1-162-282-31	CERAMIC	100PF	10%	50V				
C603	1-162-289-31	CERAMIC	390PF	10%	50V				
C604	1-161-329-00	CERAMIC	0.0068MF	30%	16V				
C605	1-162-294-31	CERAMIC	0.001MF	10%	50V				
C606	1-161-494-00	CERAMIC	0.022MF		25V				
C607	1-161-327-00	CERAMIC	0.0033MF	30%	16V				
C608	1-164-159-11	CERAMIC	0.1MF		50V				
C609	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C610	1-124-464-11	ELECT	0.22MF	20%	50V				
C611	1-136-159-00	FILM	0.033MF	5%	50V				
C612	1-124-499-11	ELECT	1MF	20%	50V				
C613	1-162-215-31	CERAMIC	47PF	5%	50V				
C614	1-136-163-00	FILM	0.068MF	5%	50V				
C615	1-136-163-00	FILM	0.068MF	5%	50V				
C616	1-123-875-11	ELECT	10MF	20%	50V				
C621	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C622	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C701	1-123-875-11	ELECT	10MF	20%	50V				
C702	1-162-290-31	CERAMIC	470PF	10%	50V				
C703	1-126-233-11	ELECT	22MF	20%	50V				
C704	1-124-910-11	ELECT	47MF	20%	35V				
C705	1-164-159-11	CERAMIC	0.1MF		50V				
C706	1-164-159-11	CERAMIC	0.1MF		50V				
C751	1-124-910-11	ELECT	47MF	20%	35V				
C752	1-124-484-11	ELECT	220MF	20%	35V				
C753	1-123-875-11	ELECT	10MF	20%	50V				
C754	1-123-875-11	ELECT	10MF	20%	50V				
C755	1-124-463-00	ELECT	0.1MF	20%	50V				
C756	1-123-875-11	ELECT	10MF	20%	50V				
C757	1-123-875-11	ELECT	10MF	20%	50V				
C758	1-124-120-11	ELECT	220MF	20%	16V				
C791	1-136-153-00	(414:WG)...CERAMIC	0.01MF	5%	50V				
C801	1-123-875-11	ELECT	10MF	20%	50V				
C802	1-162-290-31	CERAMIC	470PF	10%	50V				
C803	1-126-233-11	ELECT	22MF	20%	50V				
C804	1-124-910-11	ELECT	47MF	20%	35V				
C805	1-164-159-11	CERAMIC	0.1MF		50V				
C806	1-164-159-11	CERAMIC	0.1MF		50V				
C891	1-136-153-00	(414:WG)...CERAMIC	0.01MF	5%	50V				
C901	1-136-165-00	FILM	0.1MF	5%	50V				
C902	1-136-165-00	FILM	0.1MF	5%	50V				
C903	1-124-618-11	ELECT	2200MF	20%	35V				
C904	1-124-618-11	ELECT	2200MF	20%	35V				
C905	1-124-927-11	ELECT	4.7MF	20%	50V				
C906	1-124-927-11	ELECT	4.7MF	20%	50V				
C907	1-123-875-11	ELECT	10MF	20%	50V				
C910	1-123-875-11	ELECT	10MF	20%	50V				
C911	1-124-443-00	ELECT	100MF	20%	10V				
C912	1-124-499-11	ELECT	1MF	20%	50V				
CB701A	1-532-564-00	BREAKER, CIRCUIT							
CB801A	1-532-564-00	BREAKER, CIRCUIT							
CF001	1-567-389-11	FILTER, CERAMIC (10.7MHz)							
CF002	1-567-389-11	(414:WG,IT)...FILTER, CERAMIC(10.7MHz)							
CF101	1-567-389-11	FILTER, CERAMIC (10.7MHz)							
CN1	*1-566-926-11	SOCKET, CONNECTOR 10P							
CN2	*1-566-924-11	PLUG, CONNECTOR 10P							
CN3	*1-565-349-11	SOCKET, CONNECTOR 6P							
CN4	*1-565-350-11	PLUG, CONNECTOR 6P							
CN5	*1-565-349-11	SOCKET, CONNECTOR 6P							
CN6	*1-565-350-11	PLUG, CONNECTOR 6P							
CN7	*1-560-061-00	PIN, CONNECTOR 3P							
CN8	*1-564-336-00	PIN, CONNECTOR 2P							
CN9	*1-564-518-11	PLUG, CONNECTOR 3P							
CN12	*1-565-973-11	PLUG (WITH CONNECTOR) (L) 7P							
CN13	*1-565-956-11	SOCKET, CONNECTOR 7P							
CN31	*1-564-506-11	PLUG, CONNECTOR 3P							
CN32	*1-564-509-11	PLUG, CONNECTOR 6P							
CN33	*1-564-505-11	PLUG, CONNECTOR 2P							
CN34	*1-564-338-00	PIN, CONNECTOR 4P							
CN35	*1-564-341-11	PIN, CONNECTOR 7P							

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
CT001	1-141-266-31	CAP, TRIMMER (30PF)
CT003	1-141-227-00	(414L)...CAP, TRIMMER (20PF)
CT004	1-141-227-00	(414L)...CAP, TRIMMER (20PF)
CT005	1-141-266-31	CAP, TRIMMER (30PF)
D001	8-719-923-64	(414L)...DIODE KV1236D
D002	8-719-923-64	DIODE KV1236D
D003	8-719-000-26	DIODE US1060M
D004	8-719-903-27	(414L)...DIODE 1SS168
D005	8-719-000-26	(414L)...DIODE US1060M
D006	8-719-000-26	DIODE US1060M
D011	8-719-000-26	(414L)...DIODE US1060M
D013	8-719-000-26	(414L)...DIODE US1060M
D014	8-719-000-26	(414L)...DIODE US1060M
D016	8-719-000-26	DIODE US1060M
D017	8-719-000-26	DIODE US1060M
D201	8-719-000-26	DIODE US1060M
D202	8-719-000-26	DIODE US1060M
D203	8-719-000-26	(414:AEP,WG/414L)...DIODE US1060M
D204	8-719-000-26	(414:IT/414L)...DIODE US1060M
D205	8-719-000-26	(414:AEP,WG)...DIODE US1060M
D207	8-719-000-26	DIODE US1060M
D208	8-719-000-26	DIODE US1060M
D209	8-719-000-26	DIODE US1060M
D210	8-719-000-26	DIODE US1060M
D211	8-719-000-26	DIODE US1060M
D214	8-719-000-26	(414:AEP,WG)...DIODE US1060M
D215	8-719-000-26	(414:IT/414L)...DIODE US1060M
D216	8-719-000-26	(414:AEP,WG/414L)DIODE US1060M
D301	8-719-933-57	DIODE HZS7B2L
D302	8-719-933-57	DIODE HZS7B2L
D361	8-719-000-26	DIODE US1060M
D362	8-719-000-26	DIODE US1060M
D381	8-719-000-26	DIODE US1060M
D382	8-719-000-26	DIODE US1060M
D383	8-719-000-26	DIODE US1060M
D384	8-719-000-26	DIODE US1060M
D385	8-719-000-26	DIODE US1060M
D386	8-719-000-26	DIODE US1060M
D387	8-719-000-26	DIODE US1060M
D388	8-719-000-26	DIODE US1060M
D389	8-719-000-26	DIODE US1060M
D390	8-719-000-26	DIODE US1060M
D501	8-719-000-26	DIODE US1060M
D502	8-719-000-26	DIODE US1060M
D503	8-719-000-26	DIODE US1060M
D505	8-719-303-13	DIODE SEL1210W (TAPE)
D506	8-719-303-13	DIODE SEL1210W (CD)
D507	8-719-303-13	DIODE SEL1210W (TUNER)
D508	8-719-303-13	DIODE SEL1210W (PHONO)
D509	8-719-303-59	DIODE SEL1910W (SAT)
D510	8-719-303-59	DIODE SEL1910W (SAT)
D511	8-719-303-13	DIODE SEL1210W (STANDBY)
D512	8-719-000-26	DIODE US1060M
D513	8-719-000-26	DIODE US1060M
D514	8-719-000-26	DIODE US1060M
D751	8-719-000-26	DIODE US1060M
D752	8-719-000-26	DIODE US1060M
D911	8-719-200-77	DIODE 10E2N

Ref.No.	Part No.	Description
D912	8-719-200-77	DIODE 10E2N
D913	8-719-200-77	DIODE 10E2N
D914	8-719-200-77	DIODE 10E2N
F901	△.1-532-215-00	FUSE, TIME-LAG (0.8A)
F902	△.1-532-215-00	(414L)...FUSE, TIME-LAG (0.8A)
FE001	1-465-006-11	(414:AEP/414L)...FRONT END(FM) (2 GANG)
FE001	1-465-007-11	(414:WG,IT).....FRONT END (FM)
FL001	1-235-936-11	ENCAPSULATED COMPONENT (MW RF BROCK)
FL101	1-236-465-11	(414:WG,IT)...ENCAPSULATED COMPONENT
FL102	1-235-164-00	FILTER, LOW PASS
FL103	1-235-164-00	FILTER, LOW PASS
H901	*1-533-213-31	(414L)...HOLDER, FUSE
H902	*1-533-213-31	HOLDER, FUSE
H903	*1-533-213-31	(414L)...HOLDER, FUSE
H904	*1-533-213-31	HOLDER, FUSE
IC101	8-759-821-45	IC LA1851N
IC102	8-759-231-01	IC TC9227P
IC201	8-759-233-91	IC TC9306F-040
IC301	8-759-600-02	IC M5218L
IC302	8-759-240-52	IC TC4052BP
IC303	8-759-600-02	IC M5218L
IC321	8-759-971-24	IC BA3406AL
IC331	8-759-971-24	IC BA3406AL
IC341	8-752-031-83	IC CXA1101P
IC351	8-759-600-02	IC M5218L
IC371	8-759-600-02	IC M5218L
IC381	8-759-601-06	IC M4001BP
IC501	8-759-602-04	IC M5226P
IC502	8-759-600-02	IC M5218L
IC551	8-759-632-01	IC M50725-116SP
IC601	8-759-602-04	IC M5226P
IC701	8-749-900-95	IC STK4122MK2
IC901	8-759-602-66	IC M5230L-A
IC902	8-759-604-29	IC M5F7805
IFT101	1-404-807-11	TRANSFORMER, DISCRIMINATOR
IFT102	1-404-713-11	TRANSFORMER, IF
J301	1-565-259-21	JACK, PIN 4P (CD/PHONO)
J371	1-562-837-21	JACK (MIC)
J701	1-562-837-11	JACK (HEADPHONES)
L001	1-406-286-11	COIL (LW OSC)
L003	1-406-339-11	(414L)...COIL (OSC,SW3)
L004	1-402-424-11	(414L)...COIL (ANT,SW3)
L005	1-410-489-11	(414L)...INDUCTOR 390UH
L006	1-408-399-00	INDUCTOR 1.5MMH
L010	1-402-425-11	COIL (ANT,LW)
L011	1-408-425-00	INDUCTOR 220UH
L101	1-408-399-00	INDUCTOR 1.5MMH
L102	1-410-489-11	INDUCTOR 390UH
L351	1-410-779-21	INDUCTOR 22MMH
L352	1-410-779-21	INDUCTOR 22MMH
L361	1-410-489-11	INDUCTOR 390UH
L451	1-410-779-21	INDUCTOR 22MMH
L452	1-410-779-21	INDUCTOR 22MMH
LCD1	1-808-659-11	DISPLAY PANEL, LIQUID CRYSTAL
PL201	1-518-511-21	LAMP, PILOT (150mA 12V)

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

HST-414/414L

Ref.No.	Part No.	Description
Q001	8-729-672-42	TRANSISTOR 2SC2724-C
Q002	8-729-900-61	TRANSISTOR DTA114ES
Q003	8-729-900-80	TRANSISTOR DTC114ES
Q004	8-729-900-61	TRANSISTOR DTA114ES
Q005	8-729-900-80	TRANSISTOR DTC114ES
Q006	8-729-900-61	TRANSISTOR DTA114ES
Q007	8-729-900-80	TRANSISTOR DTC114ES
Q008	8-729-900-61	(414L)...TRANSISTOR DTA114ES
Q009	8-729-900-80	(414L)...TRANSISTOR DTC114ES
Q010	8-729-202-67	TRANSISTOR 2SK246GR3
Q011	8-729-900-80	TRANSISTOR DTC114ES
Q012	8-729-900-80	TRANSISTOR DTC114ES
Q013	8-729-672-42	(414:WG,IT)...TRANSISTOR 2SC2724-C
Q101	8-729-900-80	TRANSISTOR DTC114ES
Q103	8-729-202-67	TRANSISTOR 2SK246GR3
Q104	8-729-245-82	TRANSISTOR 2SC2458-Y
Q105	8-729-202-67	TRANSISTOR 2SK246GR3
Q106	8-729-245-82	TRANSISTOR 2SC2458-Y
Q201	8-729-245-82	TRANSISTOR 2SC2458-Y
Q341	8-729-900-80	TRANSISTOR DTC114ES
Q342	8-729-900-80	TRANSISTOR DTC114ES
Q351	8-729-900-80	TRANSISTOR DTC114ES
Q352	8-729-900-80	TRANSISTOR DTC114ES
Q361	8-729-801-93	TRANSISTOR 2SD1387
Q362	8-729-245-82	TRANSISTOR 2SC2458-Y
Q381	8-729-900-80	TRANSISTOR DTC114ES
Q382	8-729-801-93	TRANSISTOR 2SD1387
Q383	8-729-900-80	TRANSISTOR DTC114ES
Q384	8-729-900-80	TRANSISTOR DTC114ES
Q441	8-729-900-80	TRANSISTOR DTC114ES
Q442	8-729-900-80	TRANSISTOR DTC114ES
Q451	8-729-900-80	TRANSISTOR DTC114ES
Q452	8-729-900-80	TRANSISTOR DTC114ES
Q501	8-729-900-74	TRANSISTOR DTC143TS
Q502	8-729-900-74	TRANSISTOR DTC143TS
Q551	8-729-900-80	TRANSISTOR DTC114ES
Q552	8-729-900-61	TRANSISTOR DTA114ES
Q553	8-729-245-82	TRANSISTOR 2SC2458-Y
Q601	8-729-900-74	TRANSISTOR DTC143TS
Q602	8-729-900-74	TRANSISTOR DTC143TS
Q901	8-729-904-27	TRANSISTOR 2SD1761-E
Q902	8-729-920-91	TRANSISTOR 2SB1187-F
Q903	8-729-900-80	TRANSISTOR DTC114ES
R001	1-247-891-00	CARBON 330K 5% 1/4W
R002	1-249-411-11	CARBON 330 5% 1/4W
R003	1-249-401-11	CARBON 47 5% 1/4W
R004	1-249-429-11	CARBON 10K 5% 1/4W
R005	1-249-429-11	CARBON 10K 5% 1/4W
R006	1-249-429-11	(414L)...CARBON 10K 5% 1/4W
R007	1-249-441-11	CARBON 100K 5% 1/4W
R008	1-249-437-11	CARBON 47K 5% 1/4W
R009	1-247-903-00	CARBON 1M 5% 1/4W
R010	1-249-411-11	CARBON 330 5% 1/4W
R017	1-249-429-11	(414L)...CARBON 10K 5% 1/4W
R018	1-249-429-11	(414L)...CARBON 10K 5% 1/4W
R022	1-249-417-11	(414L)...CARBON 1K 5% 1/4W
R023	1-249-417-11	(414L)...CARBON 1K 5% 1/4W
R024	1-249-409-11	CARBON 220 5% 1/4W

Ref.No.	Part No.	Description
R025	1-249-429-11	CARBON 10K 5% 1/4W
R026	1-249-429-11	CARBON 10K 5% 1/4W
R027	1-249-429-11	(414L)...CARBON 10K 5% 1/4W
R028	1-249-429-11	(414L)...CARBON 10K 5% 1/4W
R031	1-247-891-00	(414:WG,IT)...CARBON 330K 1/4W
R032	1-249-411-11	(414:WG,IT)...CARBON 330K 1/4W
R101	1-249-417-11	CARBON 1K 5% 1/4W
R102	1-249-432-11	CARBON 18K 5% 1/4W
R103	1-249-435-11	CARBON 33K 5% 1/4W
R104	1-249-427-11	CARBON 6.8K 5% 1/4W
R105	1-249-430-11	CARBON 12K 5% 1/4W
R106	1-247-848-11	CARBON 5.1K 5% 1/4W
R107	1-249-416-11	(414:AEP/414L) ...CARBON 820 5% 1/4W
R107	1-249-420-11	(414:WG,IT) ...CARBON 1.8K 5% 1/4W
R108	1-249-437-11	CARBON 47K 5% 1/4W
R109	1-249-425-11	CARBON 4.7K 5% 1/4W
R110	1-249-425-11	CARBON 4.7K 5% 1/4W
R111	1-249-423-11	CARBON 3.3K 5% 1/4W
R112	1-249-423-11	CARBON 3.3K 5% 1/4W
R113	1-249-441-11	CARBON 100K 5% 1/4W
R114	1-249-429-11	CARBON 10K 5% 1/4W
R115	1-249-422-11	CARBON 2.7K 5% 1/4W
R116	1-249-422-11	CARBON 2.7K 5% 1/4W
R119	1-249-405-11	CARBON 100 5% 1/4W
R121	1-249-401-11	CARBON 47 5% 1/4W
R122	1-249-414-11	CARBON 560 5% 1/4W
R123	1-249-421-11	CARBON 2.2K 5% 1/4W
R124	1-249-423-11	CARBON 3.3K 5% 1/4W
R125	1-249-418-11	CARBON 1.2K 5% 1/4W
R126	1-249-410-11	CARBON 270 5% 1/4W
R127	1-249-425-11	CARBON 4.7K 5% 1/4W
R128	1-249-425-11	CARBON 4.7K 5% 1/4W
R129	1-249-425-11	CARBON 4.7K 5% 1/4W
R130	1-249-405-11	CARBON 100 5% 1/4W
R131	1-249-417-11	CARBON 1K 5% 1/4W
R132	1-249-418-11	CARBON 1.2K 5% 1/4W
R133	1-249-410-11	CARBON 270 5% 1/4W
R134	1-249-414-11	CARBON 560 5% 1/4W
R135	1-249-421-11	CARBON 2.2K 5% 1/4W
R136	1-249-433-11	CARBON 22K 5% 1/4W
R137	1-249-425-11	CARBON 4.7K 5% 1/4W
R138	1-249-425-11	CARBON 4.7K 5% 1/4W
R201	1-249-421-11	CARBON 2.2K 5% 1/4W
R202	1-249-421-11	CARBON 2.2K 5% 1/4W
R203	1-249-435-11	CARBON 33K 5% 1/4W
R204	1-249-441-11	CARBON 100K 5% 1/4W
R205	1-249-431-11	CARBON 15K 5% 1/4W
R207	1-249-423-11	CARBON 3.3K 5% 1/4W
R210	1-249-417-11	CARBON 1K 5% 1/4W
R211	1-249-405-11	CARBON 100 5% 1/4W
R301	1-249-437-11	CARBON 47K 5% 1/4W
R302	1-249-422-11	CARBON 2.7K 5% 1/4W
R303	1-249-417-11	CARBON 1K 5% 1/4W
R304	1-249-437-11	CARBON 47K 5% 1/4W
R305	1-249-431-11	CARBON 15K 5% 1/4W
R306	1-247-897-11	CARBON 560K 5% 1/4W

Ref.No.	Part No.	Description			
R307	1-249-437-11	CARBON	47K	5%	1/4W
R308	1-249-441-11	CARBON	100K	5%	1/4W
R309	1-249-433-11	CARBON	22K	5%	1/4W
R310	1-249-427-11	CARBON	6.8K	5%	1/4W
R311	1-249-441-11	CARBON	100K	5%	1/4W
R312	1-249-430-11	CARBON	12K	5%	1/4W
R313	1-247-870-11	CARBON	43K	5%	1/4W
R314	1-249-425-11	CARBON	4.7K	5%	1/4W
R315	1-249-441-11	CARBON	100K	5%	1/4W
R316	1-249-441-11	CARBON	100K	5%	1/4W
R317	1-249-417-11	CARBON	1K	5%	1/4W
R318	1-249-417-11	CARBON	1K	5%	1/4W
R319	1-249-409-11	CARBON	220	5%	1/4W
R320	1-249-409-11	CARBON	220	5%	1/4W
R321	1-247-903-00	CARBON	1M	5%	1/4W
R322	1-249-411-11	CARBON	330	5%	1/4W
R323	1-247-882-11	CARBON	130K	5%	1/4W
R324	1-249-426-11	CARBON	5.6K	5%	1/4W
R325	1-249-433-11	CARBON	22K	5%	1/4W
R326	1-249-433-11	CARBON	22K	5%	1/4W
R327	1-249-431-11	CARBON	15K	5%	1/4W
R328	1-249-411-11	CARBON	330	5%	1/4W
R329	1-249-425-11	CARBON	4.7K	5%	1/4W
R330	1-249-429-11	CARBON	10K	5%	1/4W
R331	1-247-903-00	CARBON	1M	5%	1/4W
R332	1-249-411-11	CARBON	330	5%	1/4W
R333	1-247-882-11	CARBON	130K	5%	1/4W
R334	1-249-426-11	CARBON	5.6K	5%	1/4W
R335	1-249-429-11	CARBON	10K	5%	1/4W
R336	1-249-431-11	CARBON	15K	5%	1/4W
R338	1-249-411-11	CARBON	330	5%	1/4W
R339	1-249-425-11	CARBON	4.7K	5%	1/4W
R340	1-249-429-11	CARBON	10K	5%	1/4W
R341	1-249-437-11	CARBON	47K	5%	1/4W
R342	1-249-429-11	CARBON	10K	5%	1/4W
R343	1-249-433-11	CARBON	22K	5%	1/4W
R344	1-249-427-11	CARBON	6.8K	5%	1/4W
R345	1-249-435-11	CARBON	33K	5%	1/4W
R347	1-247-870-11	CARBON	43K	5%	1/4W
R348	1-249-441-11	CARBON	100K	5%	1/4W
R349	1-249-429-11	CARBON	10K	5%	1/4W
R350	1-249-435-11	CARBON	33K	5%	1/4W
R351	1-249-419-11	CARBON	1.5K	5%	1/4W
R352	1-249-427-11	CARBON	6.8K	5%	1/4W
R353	1-249-416-11	CARBON	820	5%	1/4W
R354	1-249-423-11	CARBON	3.3K	5%	1/4W
R355	1-249-435-11	CARBON	33K	5%	1/4W
R356	1-249-435-11	CARBON	33K	5%	1/4W
R357	1-249-441-11	CARBON	100K	5%	1/4W
R358	1-249-430-11	CARBON	12K	5%	1/4W
R361	1-249-425-11	CARBON	4.7K	5%	1/4W
R362	1-249-438-11	CARBON	56K	5%	1/4W
R363	1-249-433-11	CARBON	22K	5%	1/4W
R364	1-249-437-11	CARBON	47K	5%	1/4W
R365	1-249-427-11	CARBON	6.8K	5%	1/4W
R366	1-249-437-11	CARBON	47K	5%	1/4W
R367	1-249-388-11	CARBON	3.9	5%	1/4W

Ref.No.	Part No.	Description			
R371	1-249-429-11	CARBON	10K	5%	1/4W
R372	1-249-417-11	CARBON	1K	5%	1/4W
R373	1-249-418-11	CARBON	1.2K	5%	1/4W
R374	1-249-440-11	CARBON	82K	5%	1/4W
R375	1-249-441-11	CARBON	100K	5%	1/4W
R376	1-247-864-11	CARBON	24K	5%	1/4W
R377	1-247-864-11	CARBON	24K	5%	1/4W
R381	1-249-429-11	CARBON	10K	5%	1/4W
R382	1-249-421-11	CARBON	2.2K	5%	1/4W
R383	1-249-423-11	CARBON	3.3K	5%	1/4W
R384	1-249-421-11	CARBON	2.2K	5%	1/4W
R385	1-249-429-11	CARBON	10K	5%	1/4W
R386	1-249-441-11	CARBON	100K	5%	1/4W
R387	1-249-429-11	CARBON	10K	5%	1/4W
R388	1-249-423-11	CARBON	3.3K	5%	1/4W
R389	△ 1-213-044-61	FUSIBLE	2.2	5%	1W F
R401	1-249-437-11	CARBON	47K	5%	1/4W
R402	1-249-422-11	CARBON	2.7K	5%	1/4W
R403	1-249-417-11	CARBON	1K	5%	1/4W
R404	1-249-437-11	CARBON	47K	5%	1/4W
R405	1-249-431-11	CARBON	15K	5%	1/4W
R406	1-247-897-11	CARBON	560K	5%	1/4W
R407	1-249-437-11	CARBON	47K	5%	1/4W
R408	1-249-441-11	CARBON	100K	5%	1/4W
R409	1-249-433-11	CARBON	22K	5%	1/4W
R410	1-249-427-11	CARBON	6.8K	5%	1/4W
R411	1-249-441-11	CARBON	100K	5%	1/4W
R412	1-249-430-11	CARBON	12K	5%	1/4W
R413	1-247-870-11	CARBON	43K	5%	1/4W
R414	1-249-425-11	CARBON	4.7K	5%	1/4W
R421	1-247-903-00	CARBON	1M	5%	1/4W
R422	1-249-411-11	CARBON	330	5%	1/4W
R423	1-247-882-11	CARBON	130K	5%	1/4W
R424	1-249-426-11	CARBON	5.6K	5%	1/4W
R425	1-249-433-11	CARBON	22K	5%	1/4W
R426	1-249-433-11	CARBON	22K	5%	1/4W
R427	1-249-431-11	CARBON	15K	5%	1/4W
R431	1-247-903-00	CARBON	1M	5%	1/4W
R432	1-249-411-11	CARBON	330	5%	1/4W
R433	1-247-882-11	CARBON	130K	5%	1/4W
R434	1-249-426-11	CARBON	5.6K	5%	1/4W
R435	1-249-429-11	CARBON	10K	5%	1/4W
R436	1-249-431-11	CARBON	15K	5%	1/4W
R441	1-249-437-11	CARBON	47K	5%	1/4W
R442	1-249-429-11	CARBON	10K	5%	1/4W
R443	1-249-433-11	CARBON	22K	5%	1/4W
R444	1-249-427-11	CARBON	6.8K	5%	1/4W
R445	1-249-435-11	CARBON	33K	5%	1/4W
R447	1-249-417-11	CARBON	1K	5%	1/4W
R448	1-249-429-11	CARBON	10K	5%	1/4W
R449	1-249-409-11	CARBON	220	5%	1/4W
R450	1-249-435-11	CARBON	33K	5%	1/4W
R451	1-249-419-11	CARBON	1.5K	5%	1/4W
R452	1-249-427-11	CARBON	6.8K	5%	1/4W
R453	1-249-416-11	CARBON	820	5%	1/4W
R454	1-249-423-11	CARBON	3.3K	5%	1/4W
R455	1-249-435-11	CARBON	33K	5%	1/4W

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

HST-414/414L

Ref.No.	Part No.	Description			
R456	1-249-435-11	CARBON	33K	5%	1/4W
R457	1-249-441-11	CARBON	100K	5%	1/4W
R458	1-249-430-11	CARBON	12K	5%	1/4W
R501	1-249-413-11	CARBON	470	5%	1/4W
R502	1-249-425-11	CARBON	4.7K	5%	1/4W
R503	1-249-434-11	CARBON	27K	5%	1/4W
R504	1-247-903-00	CARBON	1M	5%	1/4W
R505	1-249-419-11	CARBON	1.5K	5%	1/4W
R506	1-247-903-00	CARBON	1M	5%	1/4W
R507	1-249-425-11	CARBON	4.7K	5%	1/4W
R508	1-249-405-11	CARBON	100	5%	1/4W
R509	1-249-405-11	CARBON	100	5%	1/4W
R551	1-249-441-11	CARBON	100K	5%	1/4W
R552	1-247-903-00	CARBON	1M	5%	1/4W
R554	1-249-423-11	CARBON	3.3K	5%	1/4W
R555	1-249-417-11	CARBON	1K	5%	1/4W
R556	1-249-413-11	CARBON	470	5%	1/4W
R557	1-249-420-11	CARBON	1.8K	5%	1/4W
R558	1-249-419-11	CARBON	1.5K	5%	1/4W
R559	1-249-421-11	CARBON	2.2K	5%	1/4W
R560	1-249-425-11	CARBON	4.7K	5%	1/4W
R561	1-249-410-11	CARBON	270	5%	1/4W
R562	1-249-429-11	CARBON	10K	5%	1/4W
R563	1-249-429-11	CARBON	10K	5%	1/4W
R564	1-249-425-11	CARBON	4.7K	5%	1/4W
R565	1-249-441-11	CARBON	100K	5%	1/4W
R566	1-249-407-11	CARBON	150	5%	1/4W
R567	1-249-407-11	CARBON	150	5%	1/4W
R568	1-249-429-11	CARBON	10K	5%	1/4W
R569	1-249-413-11	CARBON	470	5%	1/4W
R570	1-249-417-11	CARBON	1K	5%	1/4W
R571	1-249-417-11	CARBON	1K	5%	1/4W
R581	1-249-405-11	CARBON	100	5%	1/4W
R582	1-249-417-11	CARBON	1K	5%	1/4W
R583	1-249-429-11	CARBON	10K	5%	1/4W
R601	1-249-413-11	CARBON	470	5%	1/4W
R602	1-249-425-11	CARBON	4.7K	5%	1/4W
R603	1-249-434-11	CARBON	27K	5%	1/4W
R604	1-247-903-00	CARBON	1M	5%	1/4W
R605	1-249-419-11	CARBON	1.5K	5%	1/4W
R606	1-247-903-00	CARBON	1M	5%	1/4W
R607	1-249-425-11	CARBON	4.7K	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-438-11	CARBON	56K	5%	1/4W
R703	1-249-413-11	CARBON	470	5%	1/4W

Ref.No.	Part No.	Description			
R704	1-249-438-11	CARBON	56K	5%	1/4W
R705	1-249-482-11	CARBON	4.7	5%	1/2W
R706	1-247-756-11	CARBON	2.2K	5%	1/2W
R707	1-247-756-11	CARBON	2.2K	5%	1/2W
R708	1-249-414-11	CARBON	560	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R751	△.1-212-881-11	FUSIBLE	100	5%	1/4W F
R752	△.1-212-881-11	FUSIBLE	100	5%	1/4W F
R753	1-247-752-11	CARBON	1K	5%	1/2W
R754	1-247-752-11	CARBON	1K	5%	1/2W
R755	1-249-417-11	CARBON	1K	5%	1/4W
R756	1-249-441-11	CARBON	100K	5%	1/4W
R757	1-247-903-00	CARBON	1M	5%	1/4W
R758	1-249-429-11	CARBON	10K	5%	1/4W
R759	1-249-437-11	CARBON	47K	5%	1/4W
R760	1-247-883-00	CARBON	150K	5%	1/4W
R761	1-249-429-11	CARBON	10K	5%	1/4W
R771	△.1-212-881-11	FUSIBLE	100	5%	1/4W F
R791	1-247-079-00	(414:WG)...CARBON	4.7		1/4W
R801	1-249-417-11	CARBON	1K	5%	1/4W
R802	1-249-438-11	CARBON	56K	5%	1/4W
R803	1-249-413-11	CARBON	470	5%	1/4W
R804	1-249-438-11	CARBON	56K	5%	1/4W
R805	1-249-482-11	CARBON	4.7	5%	1/2W
R806	1-247-756-11	CARBON	2.2K	5%	1/2W
R807	1-247-756-11	CARBON	2.2K	5%	1/2W
R808	1-249-414-11	CARBON	560	5%	1/4W
R809	1-249-429-11	CARBON	10K	5%	1/4W
R891	1-247-077-00	(414:WG)...CARBON	4.7		1/4W
R901	△.1-217-473-00	FUSIBLE	2.2	5%	1W F
R902	△.1-213-068-61	FUSIBLE	22	5%	1W F
R903	1-247-903-00	CARBON	1M	5%	1/4W
R904	1-249-432-11	CARBON	18K	5%	1/4W
R905	1-249-423-11	CARBON	3.3K	5%	1/4W
R906	1-249-431-11	CARBON	15K	5%	1/4W
R907	1-249-431-11	CARBON	15K	5%	1/4W
R909	△.1-213-088-61	FUSIBLE	150	5%	1W F
R910	1-249-413-11	CARBON	470	5%	1/4W
RV101	1-228-994-00	RES, ADJ, CARBON 10K (FM TUNED)			
RV102	1-228-994-00	RES, ADJ, CARBON 10K (AM TUNED)			
RV321	1-238-009-11	RES, ADJ, CARBON 220 DECK A (PB LEVEL L)			
RV331	1-238-009-11	RES, ADJ, CARBON 220 DECK B (PB LEVEL R)			
RV341	1-238-017-11	RES, ADJ, CARBON 22K (REC LEVEL L)			
RV361	1-238-019-11	RES, ADJ, CARBON 47K (REC BIAS L)			

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
RV421	1-238-009-11	RES, ADJ, CARBON 220 DECK A (PB LEVEL R)
RV431	1-238-009-11	RES, ADJ, CARBON 220 DECK B (PB LEVEL R)
RV441	1-238-017-11	RES, ADJ, CARBON 22K (REC LEVEL R)
RV461	1-238-019-11	RES, ADJ, CARBON 47K (REC BIAS R)
RV501	1-238-451-21	RES, VAR, SLIDE 250K (100Hz)
RV502	1-238-451-21	RES, VAR, SLIDE 250K (400Hz)
RV503	1-238-451-21	RES, VAR, SLIDE 250K (1kHz)
RV504	1-238-451-21	RES, VAR, SLIDE 250K (4kHz)
RV505	1-238-451-21	RES, VAR, SLIDE 250K (12kHz)
RV551	1-238-101-21	RES, VAR, SLIDE 100K (BALANCE)
RV552	1-238-539-11	RES, VAR, CARBON 50K/50K (VOLUME)
RV601	1-238-451-21	RES, VAR, SLIDE 250K (100Hz)
RV602	1-238-451-21	RES, VAR, SLIDE 250K (400Hz)
RV603	1-238-451-21	RES, VAR, SLIDE 250K (1kHz)
RV604	1-238-451-21	RES, VAR, SLIDE 250K (4kHz)
RV605	1-238-451-21	RES, VAR, SLIDE 250K (12kHz)
RY301	1-515-614-21	RELAY (REC/PB)
S200	1-554-596-21	SWITCH, KEY BOARD (0)
S201	1-554-596-21	SWITCH, KEY BOARD (1)
S202	1-554-596-21	SWITCH, KEY BOARD (2)
S203	1-554-596-21	SWITCH, KEY BOARD (3)
S204	1-554-596-21	SWITCH, KEY BOARD (4)
S205	1-554-596-21	SWITCH, KEY BOARD (5)
S206	1-554-596-21	SWITCH, KEY BOARD (6)
S207	1-554-596-21	SWITCH, KEY BOARD (7)
S208	1-554-596-21	SWITCH, KEY BOARD (8)
S209	1-554-596-21	SWITCH, KEY BOARD (9)
S210	1-554-596-21	SWITCH, KEY BOARD (MEMORY)
S211	1-554-596-21	SWITCH, KEY BOARD (ENTER)
S212	1-554-596-21	SWITCH, KEY BOARD (TUNING +)
S213	1-554-596-21	SWITCH, KEY BOARD (TUNING -)
S214	1-554-596-21	SWITCH, KEY BOARD (BAND)
S341	1-554-419-00	SWITCH, PUSH (1 KEY)(DOLBY NR)
S361	1-554-798-31	SWITCH, SLIDE (ISS)
S501	1-571-436-11	SWITCH, KEYBOARD (POWER)
S502	1-571-436-11	SWITCH, KEYBOARD (SAT)
S503	1-554-596-21	SWITCH, KEY BOARD (TAPE)
S504	1-554-596-21	SWITCH, KEY BOARD (CD)
S505	1-554-596-21	SWITCH, KEY BOARD (TUNER)
S506	1-554-596-21	SWITCH, KEY BOARD (PHONO)
S901	1-571-722-11	(414L)...SWITCH, VOLTAGE SELECTION

Ref.No.	Part No.	Description
T361	1-433-347-11	TRANSFORMER, BIAS OSCILLATION
T901	1-449-544-11	(414L)...TRANSFORMER, POWER
T901	1-449-618-11	(414)...TRANSFORMER, POWER
TB001	1-536-707-00	(414:WG,IT).....TERMINAL BOARD, PUSH 2P (ANTENNA)
TB001	1-536-708-00	(414:AEP/414L)...TERMINAL BOARD, PUSH 4P (ANTENNA)
TB002	1-563-199-21	(414:WG,IT)...CONNECTOR PAL
TB101	*4-925-530-01	PLATE, GROUND
TB701	1-536-705-00	TERMINAL BOARD (SP)
TP101	*1-560-060-00	PIN, CONNECTOR 2P (NULL)
TP302	*1-560-061-00	PIN, CONNECTOR 3P
X101	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)
X201	1-577-191-11	VIBRATOR, CRYSTAL (7.2MHz)
X551	1-577-082-11	VIBRATOR, CERAMIC (4MHz)

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

FH-411R

SERVICE MANUAL

*AEP Model
E Model
Australian Model*



- FH-411R is composed of following models. As for the service manual it is issued for each component model, then please refer to it.

COMPONENT MODEL NAME FOR FH-411R

TUNER, DECK, AMPLIFIER	HST-H411
SPEAKER	SS-H311

SPECIFICATIONS

Power requirements	AEP, G, IT, EE model : 220V AC, 50/60Hz E, EA, AUS model : 110-120V or 220-240V AC adjustable 50/60Hz
Power consumption	65watts
Dimensions	Approx. 595×270×250mm (w/h/d) (23½×10¾×10 inches) incl. projecting parts and controls.
Weight	Approx. 9.5kg (20 lb 15 oz) net
Supplied accessories	RM-S190 Remote commander (1) SONY SUM-3 (NS) batteries (2) AM loop antenna (1)

Design and specifications subject to change without notice.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

PARTS LIST

NOTE:

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

G	: Germany model	EE	: East European model
IT	: Italian model	AUS	: Australian model
EA	: Saudi Arabia model		

ACCESSORY & PACKING MATERIAL

1-465-249-11	REMOTE COMMANDER(RM-S190)
2-181-754-01	COVER, BATTERY(for RM-S190)
1-501-349-11	ANTENNA, LOOP
△1-569-007-11	(E).....ADAPTOR, CONVERSION 2P
△1-569-008-11	(AUS, EA).....ADAPTOR, CONVERSION 2P
3-752-778-11	(AEP, E, EA, AUS).....MANUAL INSTRUCTION (English, French, Spanish, Chinese)
3-752-778-41	(AEP, G, IT).....MANUAL INSTRUCTION (German, Dutch, Swedish, Italian, Portuguese)
3-752-778-51	(EE).....MANUAL INSTRUCTION (English, German, Polish, Russian)
*4-942-341-01	(E, EA).....INDIVIDUAL CARTON
*4-942-344-01	(AEP, G, IT, EE, AUS)...INDIVIDUAL CARTON
*4-942-340-01	CUSHION(HST)
*4-857-137-01	CUSHION(SPEAKER)

**COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY®**



9-956-201-11

Sony Corporation
Audio Group

Published by Customer Relations and service Group

English
91A1860-1
Printed in Japan
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SS-H414

SERVICE MANUAL

*Canadian Model
AEP Model
E Model*

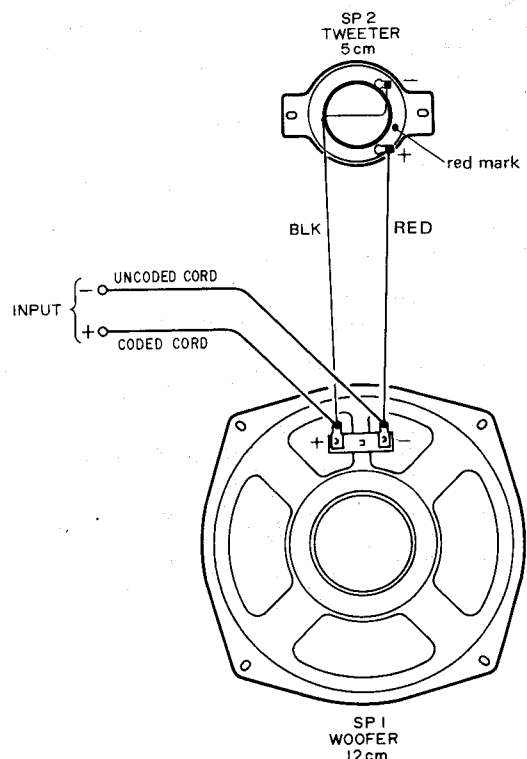


• This set is the speaker system in FH-313.

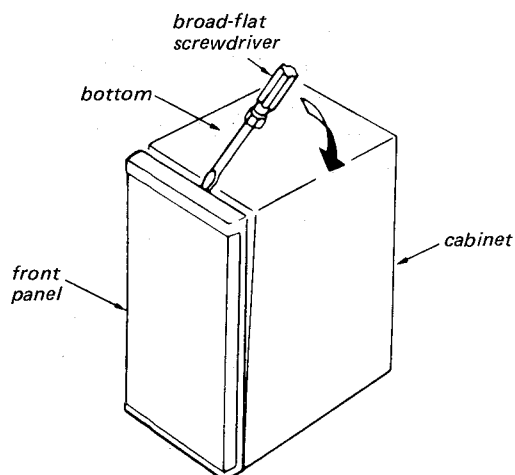
SPECIFICATIONS

Speaker system	2 way speaker system
Speaker units	Woofer : 12cm, cone type Tweeter : 5cm, cone type
Nominal impedance	6 ohms
Dimensions	Approx. 182 × 268 × 220mm (w/h/d)
Weight	Approx. 2.7kg per speaker, net

2. WIRING DIAGRAM



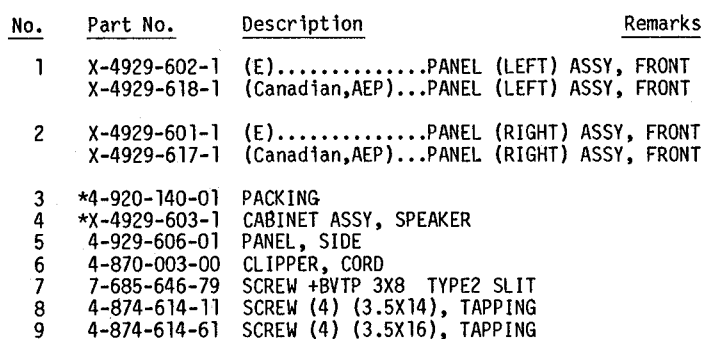
1. FRONT PANEL REMOVAL



Note: Be careful not to scratch the cabinet.



**SPEAKER SYSTEM
SONY®**



Published by A/V Engineering Service Dept.